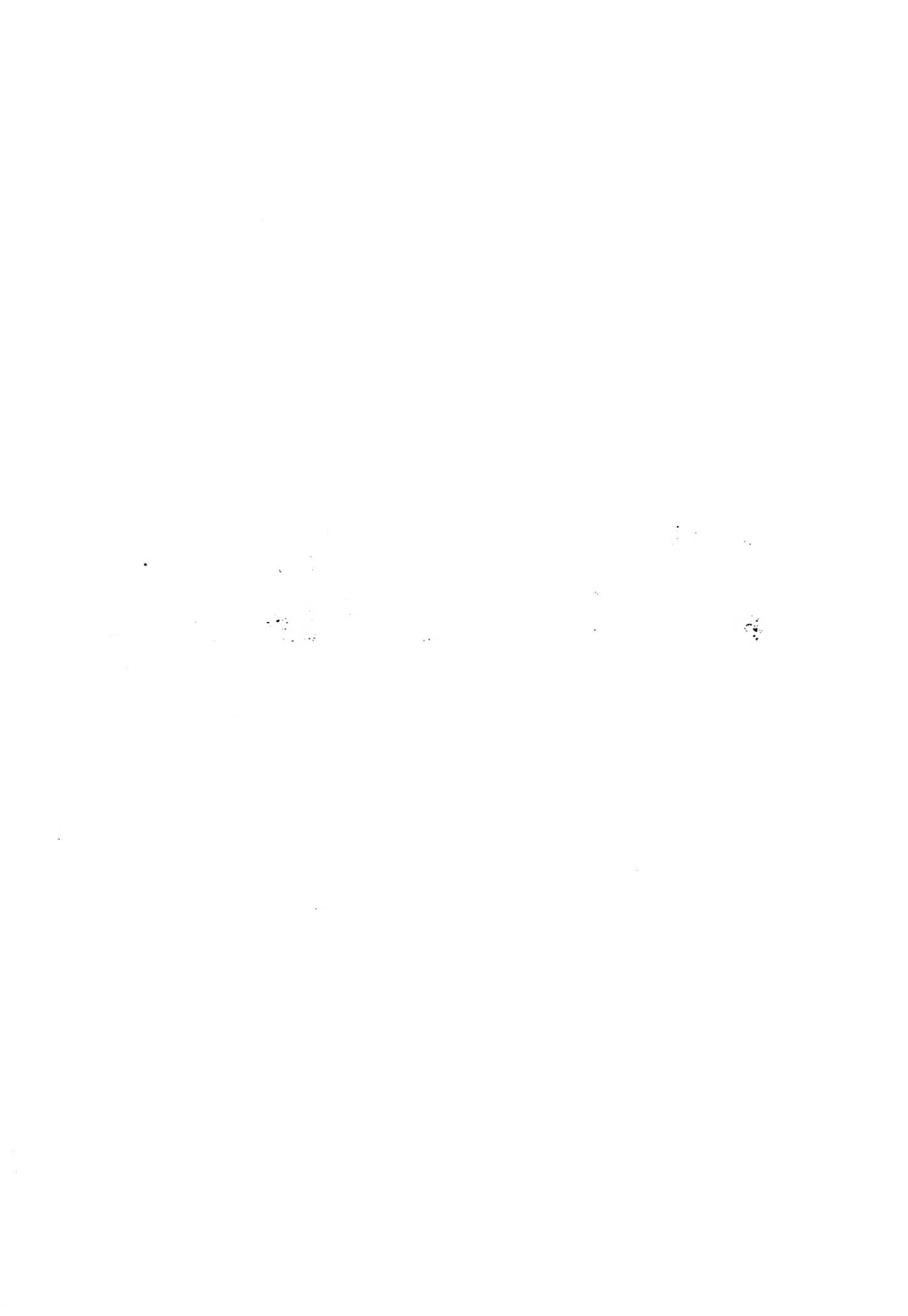
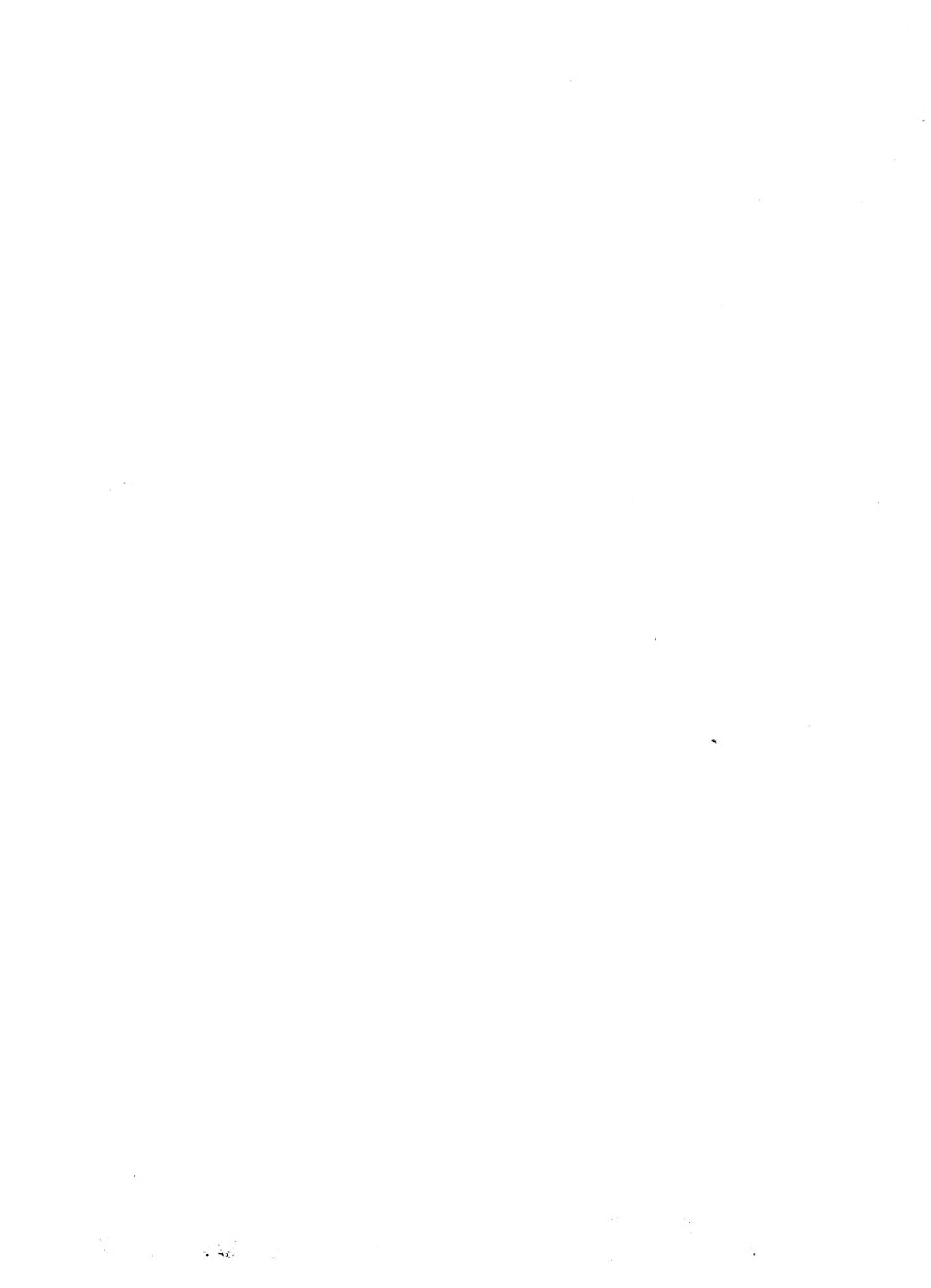


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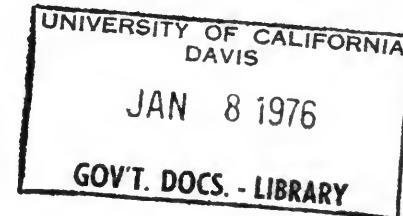
The Resources Agency

Department of Water Resources

BULLETIN No. 130-74

HYDROLOGIC DATA: 1974

Volume I: NORTH COASTAL AREA



DECEMBER 1975

CLAUDE T. DEDRICK
Secretary for Resources
The Resources Agency

EDMUND G. BROWN JR.
Governor
State of California

RONALD B. ROBIE
Director
Department of Water Resources

HYDROLOGIC DATA: 1974

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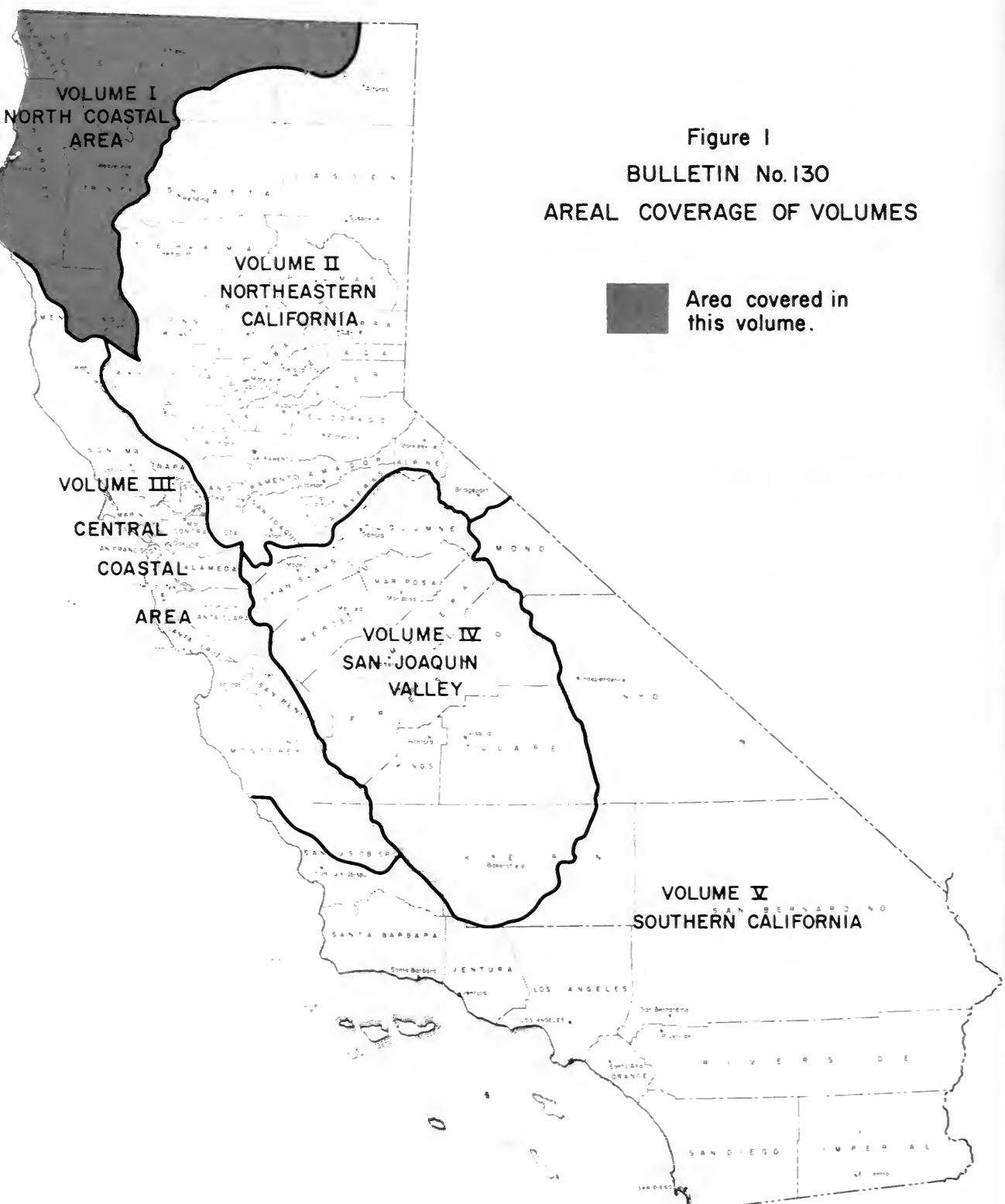
CLAIRE T. DEDRICK
Secretary for Resources
The Resources Agency

EDMUND G. BROWN JR.
Governor
State of California

RONALD B. ROBIE
Director
Department of Water Resources

Figure I
BULLETIN No. 130
AREAL COVERAGE OF VOLUMES

 Area covered in
this volume.



FOREWORD

The hydrologic data programs of the Department of Water Resources supplement the data collection activities of other agencies and help satisfy the needs for data on the quality and quantity of water in the State. Bulletin No. 130-74 presents accurate, comprehensive, and timely hydrologic data which provide a more complete knowledge of the factors affecting our environment and are prerequisites for effective planning and operation of water facilities.

The Bulletin No. 130 series is published annually in five volumes. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map on the opposite page.

Volume I contains data on climate, surface water flow, ground water levels, and surface and ground water quality in the North Coastal Area for the 1973-74 water year. Figures show hydrographic unit boundaries; ground water basins; and the location of climatological observation, surface water measurement, and surface water quality sampling stations.



Ronald B. Robie, Director
Department of Water Resources
The Resources Agency
State of California

CONVERSION FACTORS

English to Metric System of Measurement

<u>Quantity</u>	<u>English unit</u>	<u>Multiply by *</u>	<u>To get metric equivalent</u>
Length	inches (in)	25.4	millimetres (mm)
		.0254	metres (m)
	feet (ft)	.3048	metres (m)
Area	miles (mi)	1.6093	kilometres (km)
	square inches (in ²)	6.4516×10^{-4}	square metres (m ²)
	square feet (ft ²)	.092903	square metres (m ²)
	acres	4046.9	square metres (m ²)
		.40469	hectares (ha)
		.40469	square hectometres (hm ²)
Volume	square miles (mi ²)	.0040469	square kilometres (km ²)
		2.590	square kilometres (km ²)
Volume-Time (Flow)	gallons (gal)	3.7854	litres (l)
		.0037854	cubic metres (m ³)
	million gallons (10^6 gal)	3785.4	cubic metres (m ³)
	cubic feet (ft ³)	.028317	cubic metres (m ³)
	cubic yards (yd ³)	.76455	cubic metres (m ³)
	acre-feet (ac-ft)	1233.5	cubic metres (m ³)
		.0012335	cubic hectometres (hm ³)
Water Usage		1.233×10^{-6}	cubic kilometres (km ³)
	cubic feet per sec (ft ³ /s)	28.317	litres per second (l/s)
		.028317	cubic metres per sec (m ³ /s)
	gallons per minute (gal/min)	.06309	litres per second (l/s)
		6.309×10^{-5}	cubic metres per sec (m ³ /s)
Mass	million gallons per day (mgd)	.043813	cubic metres per sec (m ³ /s)
	acre-feet per acre	.3048	cubic metres per square metre (m ³ /m ²)
	pounds (lb)	.45359	kilograms (kg)
Power	tons (short, 2,000 lb)	.90718	tonne (t)
		907.18	kilograms (kg)
Pressure	horsepower (hp)	0.7460	kilowatts (kW)
	pounds per square inch (psi)	6894.8	pascal (Pa)

* For greater accuracy, use conversion factors in "Metric Practice Guide" (American Society for Testing and Materials, E 380-72).

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APPENDIX F: WASTE WATER DATA, which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".	

ABSTRACT

The report contains tables showing data on surface water flow, ground water levels, and surface and ground water quality in the North Coastal area during the 1973-74 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins.

ACKNOWLEDGMENTS

Valuable assistance and contributions were received from several agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the North Coastal area.

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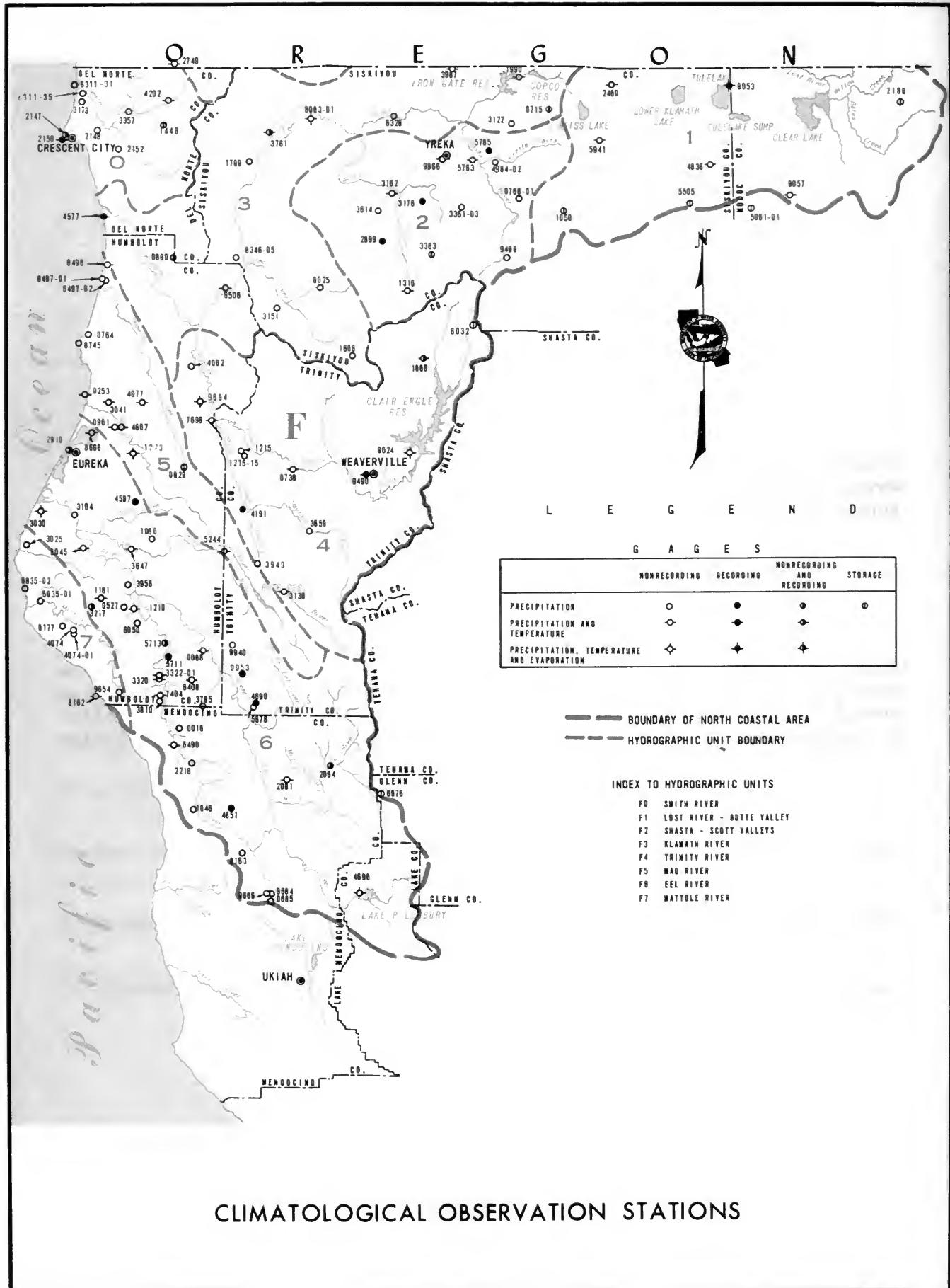
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Environmental Quality Branch
Water Resources Evaluation Section

FIGURE A-1



APPENDIX A
CLIMATOLOGICAL DATA

TABLE A-1

PRECIPITATION IN NORTH COASTAL AREA
DURING WATER YEAR 1973

Table A-1 summarizes monthly precipitation totals for selected stations for the 1974 water year, October 1, 1973, through September 30, 1974. The table shows stations by assigned number, name, and county. Location is defined by latitude and longitude in degrees to the third decimal, and stations are located on the map on the preceding page.

Precipitation values are shown to the nearest hundredth (.01) of an inch. Where digital recording rain gages are used, a zero is shown in the second decimal place, even though these instruments record to only the nearest tenth (.1) of an inch. The following notations are used to qualify the values:

- No record or incomplete record
- B Record began
- E Wholly or partially estimated
- N Record ends
- T Trace, an amount too small to measure

Precipitation data collected by the National Weather Service and local observers and cooperators in the North Coastal area are available in greater detail in other reports. The National Weather Service publishes a report entitled "Climatological Data for California" and a companion volume, "Hourly Precipitation Data". Department of Water Resources Bulletin No. 165, "Climatological Stations in California, 1971, Indexed by County", contains station information on both active and historical precipitation measurement stations.

In addition, evaporation data and daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

The county codes (CO) used in Table A-1 are shown below:

<u>County</u>	<u>Code</u>
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

PRECIPITATION IN NORTH COASTAL AREA DURING WATER YEAR 1974

CO	STA NO	LAT	LONGIT	ELEV	STATION NAME	TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
12	F6 000800	40.183	123.600	435	ALDERPOINT	.00-	6.18	20.13	.00-	.00-	.00-	.00-	.00-	.25	.92	0.47	0.50	0.00
12	F5 025300	40.971	124.089	217	ARCATA A P	69.98	5.39	22.36	11.23	8.55	6.75	9.30	4.65	.71	.83	0.15	0.05	0.01
47	F2 078681	41.591	122.324	2955	BIG SPRINGS 4 E	13.10	3.07	2.82	1.35	1.76	.50	1.22	1.62	.00	.33	0.33	0.10	0.00
23	F6 104600	39.686	123.660	1480	BRANSCOMB 2 NW	127.93	8.14	33.86	16.89	21.04	11.99	23.66	8.68	.15	.45	1.83	0.34	0.00
12	F6 108000	40.516	123.816	2056	BRIDGEVILLE 4 NNW	104.29	8.99	29.97	18.52	15.11	10.27	14.07	5.50	.60	.15	0.55	0.48	0.00
	F6 108400					.00-	6.40	22.70	.00-	.00-	.00-	10.50	3.40	.50	.40	0.30	0.40	0.00
12	F6 110100	40.350	124.108	410	BULL CREEK	122.75	5.84	34.71	20.66	24.61	11.04	10.31	5.50	.56	.54	0.45	0.45	0.00
12	F6 121000	40.308	123.906	200	BURLINGTON ST PARK	107.60	6.49	32.40	15.94	21.32	9.82	14.39	4.21	.39	1.14	0.82	0.68	0.00
53	F4 121500	40.796	123.479	2150	BURNT RANCH IS	68.00	6.61	17.54	12.36	8.02	7.38	10.26	3.74	.29	.53	0.42	0.05	0.00
12	F5 123300	40.766	123.900	426	BUTLER VALLEY RANCH	73.49	7.14	19.16	11.64	8.25	9.79	10.12	5.95	.93	.29	0.10	0.12	0.00
47	F2 131600	41.300	122.800	3136	CALLAHAN RANGER STA	29.36	3.40	5.48	4.00	6.66	2.23	4.16	1.81	.14	.70	0.51	0.27	0.00
47	F3 160600	41.100	123.050	2986	CECILVILLE 5 SE	.00-	5.26	.00-	.00-	.00-	.00-	2.97	.56	.63	0.92	0.00	0.00	
47	F3 179900	41.708	123.448	975	CLEAR CREEK	100.51	8.21	26.03	18.12	17.85	10.41	13.89	4.05	.04	.11	0.20	0.00	0.00
53	F4 188600	41.003	122.700	2500	COFFEE CREEK RS	.00-	7.10	.00-	11.60	18.00	7.60	15.10	4.10	.10	1.20	2.30	0.30	0.00
47	F3 199000	41.983	122.333	2700	COPCO DAM NO 1	24.54	2.94	6.04	3.10	4.07	2.40	2.82	2.56	.08	.00	0.00	0.20	0.00
23	F6 208100	39.763	123.250	1305	COVELO	62.35	5.54	15.00	8.73	11.03	4.77	11.75	3.85	.27	.50	0.85	0.06	0.00
23	F6 208400	39.833	123.003	1514	COVELO EEL RIVER RS	.00-	.00-	15.10	8.50	.00-	6.10	10.10	2.30	.50	.00	0.90	0.00	0.00
08	F6 214700	40.766	124.200	40	CRESCENT CITY 1 N	93.81	6.07	31.25	14.68	12.37	11.00	12.02	3.20	.75	.85	0.68	0.00	0.00
08	F6 214800	41.000	124.083	120	CRESCENT CITY 7 ENE	123.28	7.98	41.72	21.81	14.61	14.19	14.42	6.10	.94	.85	0.63	0.03	0.00
08	F6 215000	41.766	124.200	50	CRESCENT CITY MMS	.00-	6.90	.00-	.00-	13.30	9.20	13.40	3.50	.70	1.00	0.00	0.00	0.00
08	F6 215200	41.755	123.991	360	CRESCENT CITY 11 E	159.38	10.48	50.39	26.59	23.39	18.10	19.95	7.24	2.10	.51	0.63	0.00	0.00
23	F6 221800	39.833	123.633	1270	CUMMING	114.87	8.19	30.56	15.00	21.55	10.86	20.51	6.30	.21	.35	1.10	0.16	0.00
47	F1 240000	41.955	121.908	4240	DORRIS INSPECT STA	19.66	2.27	4.31	1.47	1.75	1.20	3.14	1.23	.16	.34	3.12	0.67	0.00
47	F2 274900	42.000	123.716	1711	ELK VALLEY	.00-	6.98	39.59	23.33	17.05	13.98	15.99	.00-	2.07	.20	0.15	0.00	0.00
47	F2 289900	41.666	122.900	2912	ETNA	42.76	3.77	9.27	6.74	10.47	3.95	5.69	2.39	.06	.13	0.24	0.05	0.00
12	F6 291000	40.800	124.166	43	EUREKA WB CITY	51.05	4.14	16.58	7.02	6.02	5.98	6.98	3.15	.42	.33	0.11	0.32	0.00
12	F5 304100	40.943	124.019	205	FIELDBROOK 4 D RCH	95.86	10.18	28.45	14.50	10.75	12.15	15.15	2.20	1.10	.80	0.60	0.00	0.00
00	F3 312200	41.811	122.371	2960	FOOTHILL SCHOOL	19.83	2.90	4.40	2.09	2.84	1.70	2.90	2.14	.14	.02	0.62	0.00	0.00
53	F4 313000	40.303	123.333	2340	FOREST GLEN	109.91	7.59	30.14	16.80	20.25	8.60	20.31	3.93	.35	.67	1.01	0.26	0.00
08	F6 317300	41.866	124.150	46	FORT DICK	105.74	6.89	34.45	18.13	14.01	12.22	13.11	4.56	.59	1.15	0.58	0.05	0.00
47	F2 317600	41.583	122.716	3324	FORT JONES 6 ESE	31.80	3.50	6.50	3.50	7.80	2.50	4.10	2.40	.30	.20	0.70	0.30	0.00
47	F2 318200	41.600	122.059	2720	FORT JONES RANGER ST	34.20	3.86	7.17	5.15	7.13	2.62	3.33	3.92	.05	.14	0.79	0.04	0.00
12	F6 319400	40.600	124.150	60	FORTUNA	63.92	3.95	19.30	8.30	9.36	7.60	5.40	8.72	.33	.36	0.06	0.52	0.00
12	F6 321700	40.306	124.065	2500	FOX CAMP	136.26	13.60	37.66	20.64	25.33	11.98	20.41	6.17	.47	.00	0.00	0.00	0.00
12	F6 332000	40.100	123.000	340	GARBERVILLE	90.84	6.83	24.31	13.04	19.30	7.98	13.06	4.29	.09	.86	0.45	0.65	0.00
12	F6 332201	40.100	123.794	540	GARBERVILLE MMS	91.90	6.81	26.50	12.11	19.44	7.67	12.54	4.43	.11	1.05	0.55	0.69	0.00
08	F6 335700	41.866	123.986	384	GASQUET RANGER STA	130.51	7.40	45.96	22.89	17.95	16.08	18.63	6.50	1.24	.47	0.79	0.00	0.00
47	F2 361400	41.550	122.900	2018	GREENVIEW	37.40	3.70	7.07	5.05	11.67	3.37	4.36	1.50	.00	.20	0.68	0.00	0.00
47	F3 376100	41.800	123.383	1890	HAPPY CAMP RANGR STA	86.80	7.34	22.17	15.64	15.71	9.98	11.49	4.19	.05	.13	0.20	0.00	0.00
23	F6 378500	39.969	123.611	1910	HARRIS 7 SSE	102.76	7.24	26.97	13.06	18.74	10.95	18.25	4.74	.48	.54	0.64	0.35	0.00
53	F4 385900	40.550	123.166	2340	HAYFORK RANGER STA	55.03	3.95	11.30	11.01	10.69	4.32	8.60	2.52	.30	.56	0.96	0.82	0.00
47	F3 398700	42.000	122.633	2909	HILTS	33.53	3.07	6.83	4.38	8.55	2.33	6.70	.87	.49	.05	0.18	0.00	0.00
12	F4 408200	41.050	123.666	350	HOOPOA	82.51	8.22	21.86	15.46	9.51	10.01	11.73	4.90	.37	.15	0.22	0.00	0.00
53	F4 419100	40.616	123.466	1260	HYAMPON	.00-	8.10	23.50	13.44	.00-	.00-	.00-	3.53	.00-	.00	0.20	0.00	0.00
08	F6 420200	41.900	123.769	1250	IOLEWILD MMS	121.49	6.55	36.07	19.39	19.05	13.98	17.55	6.50	1.01	.39	0.20	0.00	0.00
08	F6 457700	41.516	124.033	25	IKLAMATH	113.99	8.74	35.30	26.61	12.75	12.29	15.02	7.34	.85	.57	0.53	0.02	0.00
12	F6 458700	40.633	123.900	2356	KNEELAND 10 SSE	.00-	8.14	25.05	12.68	8.90	.00-	21.43	4.51	.73	.28	0.17	0.30	0.00
12	F6 460200	40.866	123.958	150	KORBEL	68.12	8.19	19.19	9.92	6.37	7.39	8.31	5.47	.94	1.82	0.36	0.36	0.00
47	F1 463800	41.729	121.508	4770	LAVA BEDS NAT MON	18.55	2.68	3.41	1.75	3.01	1.15	4.42	.48	.13	.02	1.03	0.47	0.00
23	F6 465100	39.760	123.483	1640	LAYTONVILLE	.00-	6.50	24.70	.00-	.00-	7.30	18.40	3.30	.20	.60	1.90	0.10	0.00
47	F2 494002	41.716	122.325	2725	LITTLE SHASTA	14.42	2.51	3.03	1.36	1.71	.99	2.05	1.12	.15	.32	0.82	0.36	0.00
53	F5 524400	40.450	123.533	2775	MAD RIVER RANGER STA	96.06	8.13	23.04	16.17	18.08	8.80	14.14	5.71	.37	.75	0.55	0.32	0.00
12	F6 571100	40.163	123.783	263	MIRANDA 4 SE	.00-	7.60	27.40	11.20	19.50	8.00	.00-	.00-	.00-	.00	0.00	0.00	0.00
12	F6 571300	40.200	123.766	400	MIRANDA SPENGLER RCH	.00-	7.18	24.34	10.41	17.68	7.46	.00-	.00-	.21	1.05	0.35	0.50	0.00
47	F2 578300	41.728	122.526	2500	MONTAGUE	16.10	2.39	3.21	1.59	2.72	.78	2.07	2.27	.02	.09	0.77	0.19	0.00
47	F2 578500	41.750	122.466	2640	MONTAGUE 3 NE	.00-	2.40	3.90	1.70	3.40	1.20	2.60	2.00	.10	.10	0.70	0.00	0.00
47	F1 594100	41.783	122.000	4250	MOUNT HEIRON R S	13.31	2.62	3.55	1.49	1.17	.64	2.17	.65	.08	.05	0.07	0.62	0.00
12	F6 605000	40.261	123.866	190	MYERS FLAT	97.67	7.00	29.76	14.42	17.80	8.05	13.77	3.79	.15	1.24	1.10	0.39	0.00
47	F3 632900	41.833	123.050	1963	OAK KNOLL RS 2	42.68	3.92	9.95	5.07	9.31	4.58	6.27	2.84	.21	.11	0.42	0.00	0.00
12	F6 640800	40.083	123.661	2225	OLD HARRIS	107.10	8.59	29.47	15.45	14.00	9.68	16.93	10.38	.31	.79	1.02	0.48	0.00
12	F5 649701	41.323	124.041	50	ORICK 3 NNE	95.01	8.29	30.68	14.56	16.24	9.65	13.08	6.25	.79	.81	0.60	0.04	0.00
12	F5 649702	41.323	124.043	75	ORICK ARCATA REDWOOD	94.51	8.64	30.37	12.05	12.13	10.15	14.63	3.85	.69	.77	0.43	0.00	0.00
12	F5 649800	41.366	124.016	161	ORICK PRAIRIE CREEK	94.62	7.91	29.62	15.22	9.87	9.68	12.91	6.28	.80	.139	0.42	0.32	0.00
12	F5 650800	41.300	123.533	403	ORLEANS	79.57	7.90											

TABLE A-2

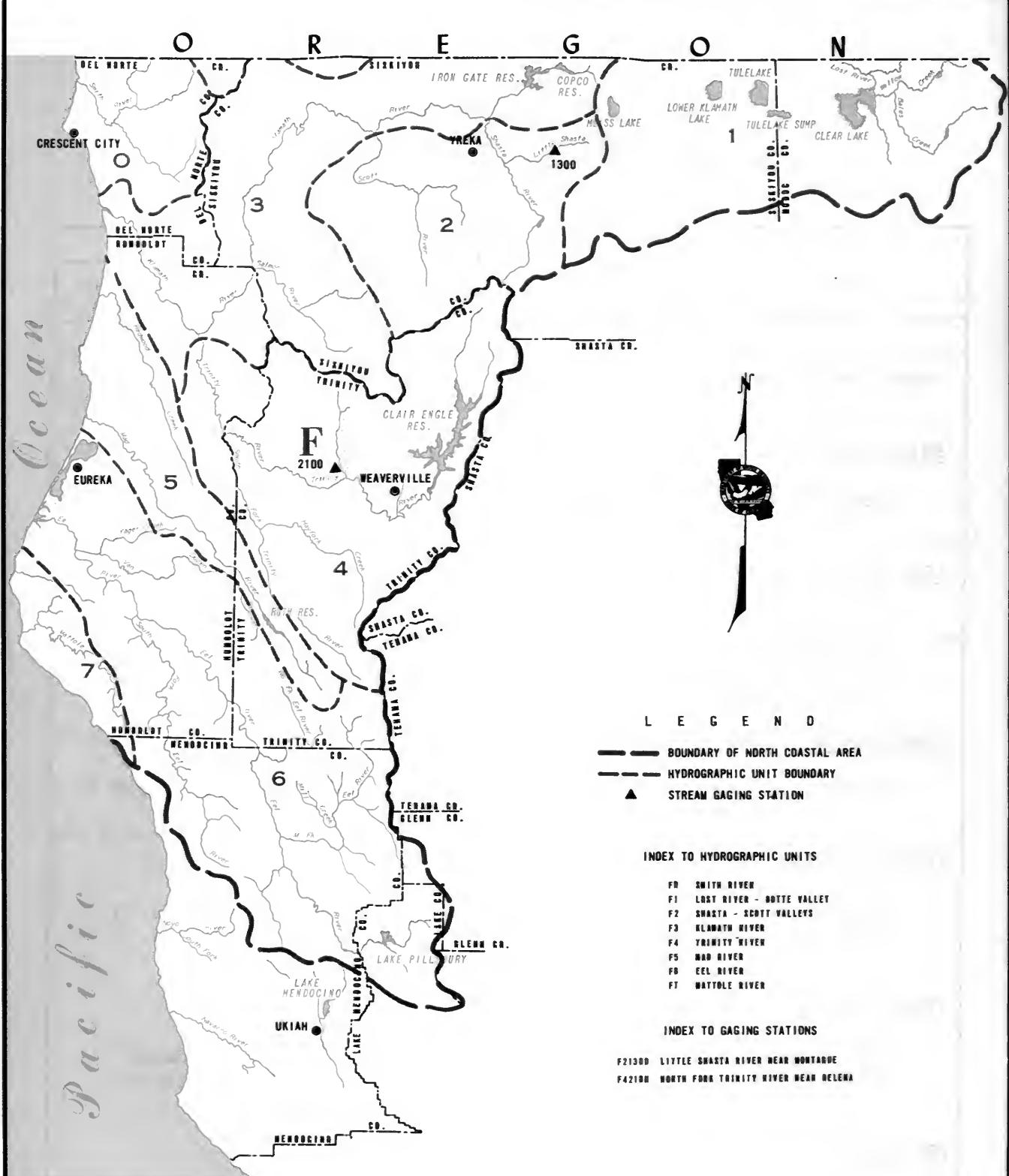
STORAGE GAGE PRECIPITATION DATA

Table A-2 lists storage gages for which the seasonal accumulation of precipitation is reported. These gages are located in the remote mountain regions where no observers are available to operate conventional rain gages. Storage precipitation gages are tanks with capacity for storing an entire year's rainfall, along with antifreeze to melt frozen precipitation and oil to prevent evaporation losses. Once each year, in the summer or early fall, the precipitation that has accumulated since the last measurement is measured and then emptied out. With the addition of the proper amount of oil and antifreeze, the gage is ready to receive the next season's amount. Although logistics preclude conducting the measurement operation exactly at the end of the water year and exactly one year following the previous measurement, data from the gages fairly accurately depict the total precipitation for the water year.

TABLE A-2
 STORAGE GAGE PRECIPITATION DATA
 NORTH COASTAL AREA
 (Measurements by the Department of Water Resources)

Station	Station Number	1973-74 Season		
		Measurement Period	Precipitation in Inches	
NORTH COASTAL AREA				
<u>SMITH RIVER</u>				
Camp Six Lookout	1446	6-18-73 to 6-25-74	169.66	
<u>LOST RIVER-BUTTE VALLEY</u>				
Bray 10 WSW	1050	6-19-73 to 6-26-74	No data ^{1/}	
Crowder Flat	2188	6-27-73 to 6-19-74	21.91	
Long Bell Station	5081-01	6-21-73 to 6-20-74	43.31	
Medicine Lake	5505	6-21-73 to 8-29-74	83.27	
<u>SHASTA-SCOTT VALLEYS</u>				
Gazelle Lookout	3363	6-19-73 to 6-27-74	26.95	
<u>KLAMATH RIVER</u>				
Beswick 7S	0715	6-19-73 to 8-29-74	61.43	
Blue Creek Mountain	0899	6-17-73 to 6-24-74	176.88	
<u>TRINITY RIVER</u>				
Board Camp Mountain	0929	6-17-73 to 6-25-74	No data ^{1/}	
Mumbo Basin	6032	6-20-73 to 6-27-74	102.16	
<u>EEL RIVER</u>				
Plaskett	6976	6-14-73 to 6-3-74	84.20	

1/ Vandalism.



SURFACE WATER MEASUREMENT STATIONS

APPENDIX B
SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1974 water year, the period from October 1, 1973 to September 30, 1974. The data consist of summary tables of monthly and annual unimpaired runoff from four major North Coastal streams and daily mean discharges at the Department's two North Coastal area gaging stations (see Figure B-1).

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. Major exportations from the North Coastal Area, made through the U. S. Bureau of Reclamation's Judge Francis Carr Powerplant and the Pacific Gas and Electric Company's Potter Valley Powerhouse, are shown in the USGS report listed below. The data published in the following reports together with this report present a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California
Part I. Surface Water Records
Volume 1: Colorado River Basin, Southern Great
Basin, and Pacific Slope Basins excluding Central
Valley"
United States Department of the Interior, Geological
Survey
Prepared in cooperation with the California
Department of Water Resources and with other agencies.
2. Bulletin 120, "Water Conditions in California",
Fall Issue, Department of Water Resources.
3. Bulletin 157, "Index of Stream Gaging Stations in
and Adjacent to California, 1970". June 1971.
Department of Water Resources.

TABLE B-1 ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.

TABLE B-1
ANNUAL UNIMPAIRED RUNOFF
In Percent of Average

WATER YEAR	KLAMATH RIVER COPCO TO ORLEANS	SALMON RIVER AT SOMESBAR	TRINITY RIVER AT LEWISTON	EEL RIVER AT SCOTIA
Average Annual Runoff*	4,434	1,225	1,227	5,379
1921-22			64	69
1922-23			56	51
1923-24			22	16
1924-25			122	133
1925-26			66	61
1926-27			149	146
1927-28	86	89	86	86
1928-29	57	48	43	35
1929-30	-	63	66	65
1930-31	40	39	33	30
1931-32	76	85	59	67
1932-33	81	83	65	68
1933-34	49	47	56	46
1934-35	81	93	79	84
1935-36	90	93	83	107
1936-37	73	80	81	66
1937-38	179	182	171	200
1938-39	58	62	47	50
1939-40	102	104	131	136
1940-41	100	103	208	153
1941-42	104	108	147	138
1942-43	133	142	90	106
1943-44	62	52	53	42
1944-45	82	92	85	89
1945-46	117	124	115	112
1946-47	58	63	60	49
1947-48	96	101	98	88
1948-49	72	78	89	77
1949-50	92	96	70	77
1950-51	142	147	131	133
1951-52	149	159	148	149
1952-53	146	147	131	133
1953-54	138	131	129	129
1954-55	60	48	60	60
1955-56	186	179	165	190
1956-57	97	97	88	81
1957-58	184	184	219	217
1958-59	77	82	85	77
1959-60	78	77	84	87
1960-61	102	98	99	100
1961-62	74	78	85	73
1962-63	133	140	130	132
1963-64	90	92	65	64
1964-65	161	152	140	175
1965-66	101	91	110	96
1966-67	117	103	135	123
1967-68	76	77	82	79
1968-69	135	133	143	161
1969-70	143	130	130	139
1970-71	192	200	136	148
1971-72	142	148	94	87
1972-73	81	73	113	112
1973-74**	219	226	222	219

* Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

** Preliminary data subject to revision.



TABLE B-2
MONTHLY UNIMPAIRED RUNOFF
In Percent of Average

MONTH		KLAMATH RIVER	SALMON RIVER	TRINITY RIVER	EEL RIVER
		COPCO TO ORLEANS	AT SOMESBAR	AT LEWISTON	AT SCOTIA
October 1973	Percent	162	220	202	212
	Average	86	21	21	55
November 1973	Percent	525	652	807	810
	Average	215	55	51	284
December 1973	Percent	194	327	247	227
	Average	487	128	99	939
January 1974	Percent	362	365	506	229
	Average	655	165	110	1225
February 1974	Percent	111	115	85	64
	Average	607	158	149	1176
March 1974	Percent	223	210	198	276
	Average	588	158	157	795
April 1974	Percent	206	160	140	215
	Average	627	179	217	550
May 1974	Percent	149	129	160	79
	Average	587	192	241	239
June 1974	Percent	183	181	212	84
	Average	335	108	123	79
July 1974	Percent	159	180	198	136
	Average	125	35	36	22
August 1974	Percent	136	150	98	181
	Average	67	15	13	10
September 1974	Percent	111	118	52	99
	Average	56	10	9	7
1973-74 Water Year		219	226	222	219
		4,434	1,225	1,227	5,379

Note: The percent values are preliminary data subject to revision. Average annual unimpaired runoff in thousands of acre-feet adjusted to the 50-year period October 1920 through September 1970.

TABLE B-3 DAILY MEAN DISCHARGE

A stream gaging station is named after the stream and the nearest post office. Each of the two gaging stations has been assigned an identification number, the letter and first digit of which denote the hydrographic unit; the remaining digits further identify the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

1. Daily flows - cubic feet per second

0.0	- 9.9	nearest	Tenth
10	- 999	"	Unit
1,000	- 9,999	"	Ten
10,000	- 99,999	"	Hundred
100,000	- 999,999	"	Thousand

2. Monthly means - cubic feet per second

0.0	- 99.9	nearest	Tenth
100	- 9,999	"	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred

3. Yearly totals - acre-feet

0.0	- 9,999	nearest	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred
1,000,000	- 9,999,999	"	Thousand

TABLE B-3
DAILY MEAN DISCHARGE
(IN CUBIC FEET PER SECOND)

WATER YEAR		STATION NO.	STATION NAME
1974	F21300	LITTLE SHASTA RIVER NEAR MONTAGUE	

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	3.4	7.4	42	19	24	16	95	58	46	17	9.4	6.7	1
2	3.2	6.1	29	12	23	17	87	60	44	17	9.3	6.5	2
3	3.2	6.1	24	8.0 *	23	16	82	61	43	16	9.2	6.5	3
4	3.2	6.2	21	7.0	21	15	79	62	42	16	9.1	6.5 *	4
5	3.1	7.6	20	5.9	20	16	84	64	43	16	13	6.4	5
6	3.6	19	22	5.1	19	18	77	69	42	15	12	6.3	6
7	5.5	22	48	5.1	18	19	68	79	41	15	9.7	6.3	7
8	3.6	41	39	5.2	18	16	63	85	39	15	9.0	6.2	8
9	3.3	17	27	5.4	17	17	58	85	37	16	8.7	6.2	9
10	3.1	21	22	5.6	17	18	58	84 *	34	16	8.6	6.2 *	10
11	3.1 *	80	23	6.0	16	19	57	85	32	16	8.5	6.1	11
12	3.0	76	20	7.0	16	21	56	85	30	16	8.1	5.9	12
13	3.0	30 *	18	8.0	15	22	52	80	29 *	15	8.1	6.0	13
14	3.0	23	18	38	15	23	49	76	28	14	8.1	6.0	14
15	3.1	20	21	112	14	30	49	73	27	14	8.0 *	6.0	15
16	3.0	24	27	192	13	37	51	70	26	14	7.7	5.9	16
17	3.0	25	69	117	12	51	53	68	26	13	7.5	5.9	17
18	3.0	22	39	104	12	70	55	65	25	13	7.5	5.8	18
19	3.0	17	26	86	12	64	54	64	24	12 *	7.6	5.6	19
20	3.2	16	42	65	11	59 *	50	61	24	12	7.6	5.6	20
21	3.9	16	36	48	12	55	50	59	23	12	7.4	5.6	21
22	12	15	26	45 *	12	52	54	57	22	12	7.2	5.6	22
23	15	14	23	43	12	51	60	56	21	11	7.2	5.6	23
24	10	14	24	39	13	50	61	54	21	11	7.2	5.5	24
25	8.1	14	40	38	15	50	60	53	20	11	7.2	5.6	25
26	6.2	14	29	33	16	50	56	53	19	11	7.2	5.6	26
27	5.8	17	27	34	16	50	52	53	19	11	7.0	5.5	27
28	7.9	30	33	34	16	49	49	53	18	11	7.1	5.3	28
29	8.3	67	49	28		103	50	52	18	10	7.0	5.3	29
30	6.8	67	30	26		124	54	50	17	9.8	6.9	5.3	30
31	6.4	75	25	25		89	48	48	17	9.5	6.9	5.3	31
MEAN	5.0	25.4	30.3	38.9	16.0	41.5	60.8	65.2	29.3	13.5	8.2	5.9	MEAN
MAX.	15	80	69	192	24	124	95	85	46	17	13	6.7	MAX.
MIN.	3.0	6.1	18	5.1	11	15	49	48	17	9.5	6.9	5.3	MIN.
AC. FT.	309	1512	.1862	2393	889	2553	3616	4011	1745	828	506	352	AC. FT.

WATER YEAR SUMMARY

E - ESTIMATED
NR - NO RECORD
* - DISCHARGE MEASUREMENT OR
OBSERVATION OF NO FLOW
- E AND *

MEAN DISCHARGE	MAXIMUM			MINIMUM			TOTAL				
341	DISCHARGE	GAGE HT.	MO. DAY	TIME	DISCHARGE	GAGE HT.	MO. DAY	TIME	ACRES FT		
251	251	3.23	1	15	2315	2.9	0.59	10	12	2215	20,580

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.E.M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
41 45 11	122 17 58	NW15 45N 4W	5910 E	10.66	12/22/64	28-NOV 51 5	APR 52-APR 55 SEP 56-DATE	1956	1964	0.00	LOCAL
						28-NOV 51 8	APR 52-APR 55 SEP 56-DATE				

Station located S of Ball Mountain Road, 12 mi. NE of Montague, 16 mi. SW of Macdoel. Stage-discharge relationship affected by ice at timea. Drainage area is 48.2 sq. mi.

8 - Irrigation season only.

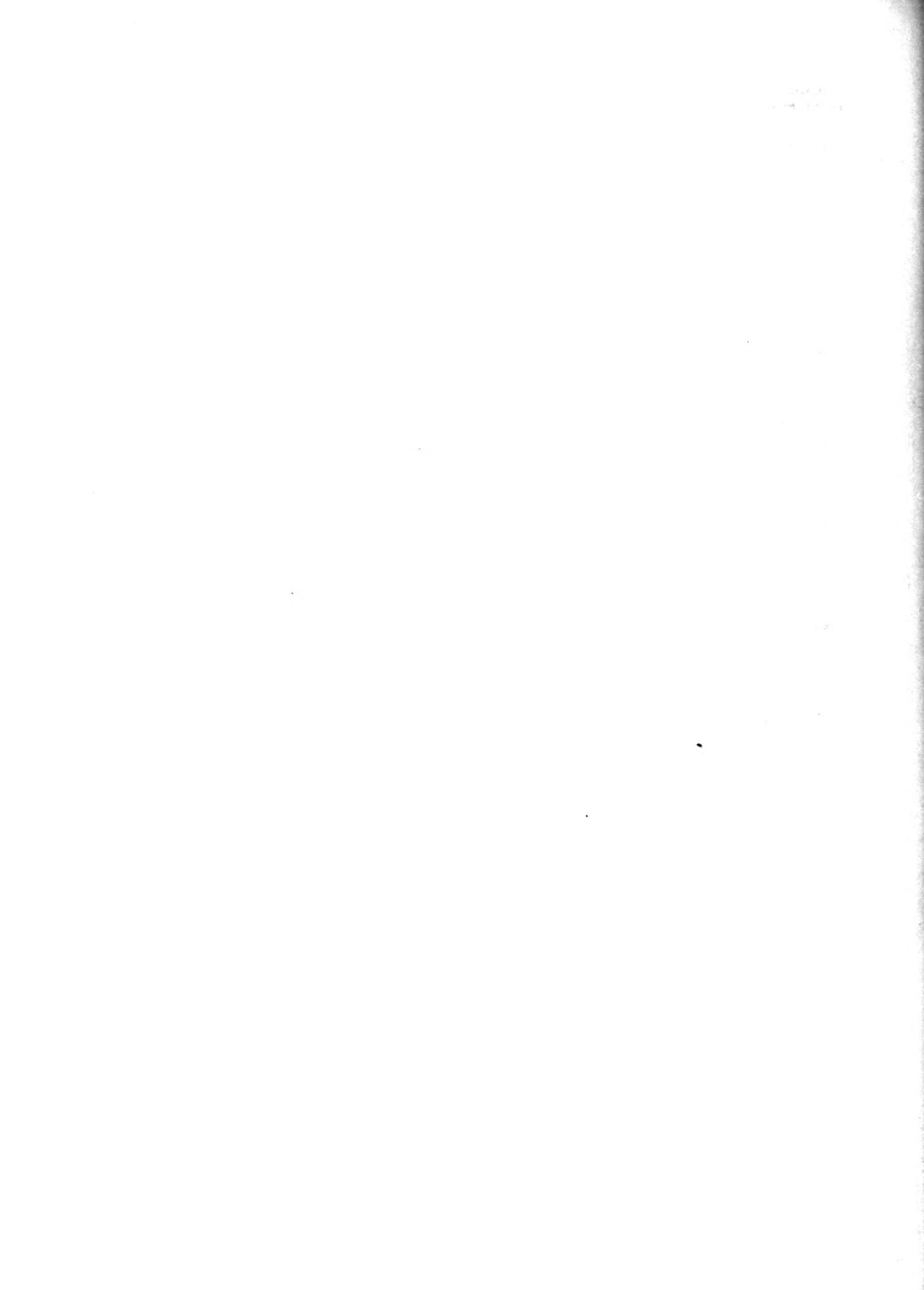


TABLE B-3 (CONT.)
DAILY MEAN DISCHARGE
 (IN CUBIC FEET PER SECOND)

WATER YEAR		STATION NO.	STATION NAME
1974	F42100	NORTH FORK TRINITY RIVER NEAR HELENA	

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	33	216	3350	1270	672	2170	3600	942 *	607	246	100	40	1
2	31	175	1870	1060 *	642	1590	3120	931	637	240	99	39	2
3	29	146	1390	923	606	979	2810	891	643	234	93	38	3
4	29	137	1160	808	580	730 *	2730	931	618	232	92	37	4
5	27	321	1020	727	546	638 *	2660	999	712	226	99	36	5
6	37	1170	960	652	515	635	2590	1070	675	220	107	36	6
7	90	1630	1230	594	492	677	2510	1150	571 *	216	87	35	7
8	60	2620	1300	551	479	617	2430	1190	449	208	74	35	8
9	54	3070 *	1140	514	470	564	2360	1060	438	205	68	35 *	9
10	47	4030	1010	483	467	527	2280	871	488	198 *	64	35	10
11	42	6500	982	464	463	717	2210	824	549	191	63	35	11
12	38 *	3330	945	474	461	1050	2140	774	544	190	62	34	12
13	36	2030	1200	699	454	995	2070	673	481	177	58	34	13
14	34	1620	1120	2650	449	1010	2000	619	460	177	56 *	33	14
15	32	1720 *	993	10100	449	1210	1930	592	417	178	53	33	15
16	31	2560	952	16200	450	1240	1860	525	350	170	50	33	16
17	30	1930	1760	5920	445	1250	1780	470	328	174	50	32	17
18	29	1480	1520	3970 *	463	1230	1720	429	325	177	49	31	18
19	29	1170	1240	3500	722	1120	1650	395	366	189	49	31	19
20	35	1010	1790	2700	627	1060	1580	386	312	196	47	31	20
21	230	897	2700	2090	587	1000	1520	384	302	182	45	30	21
22	954	828	1910	1660	575	964	1450	413	297	166	43	29	22
23	1090	764	1470	1270	547	923	1380	453	292	141	43	28	23
24	641	759	1290	1090	523	899	1320	498	284	134	43	28	24
25	542	726	1440	972	540	994	1260	627	278	142	44	28 *	25
26	385	677	1350	865	598	998	1200	819	273	148	43	27	26
27	344	658	1490	784	631	1090	1140	853	266	143	41	27	27
28	363	833	1830	717	1490	1210	1090	753	262	137	40	27	28
29	302	2130	3200	659	4280	1030	681	256	122	40	27	29	29
30	246	4650	2200	613	6310	977	574	250	113	41	27	30	30
31	241	1600	639		3290		560	104		40		31	
MEAN	197	1660	1529	2117	569	1354	1947	721	424	180	60.7	32.4	
MAX.	1090	6500	3350	16200	1490	6310	3600	1190	712	246	107.	40	
MIN.	27	137	945	464	445	527	977	384	250	104	40	27	
AC. FT.	12120	98750	94040	130200	31620	83240	115800	44310	25250	11060	3735	1926	

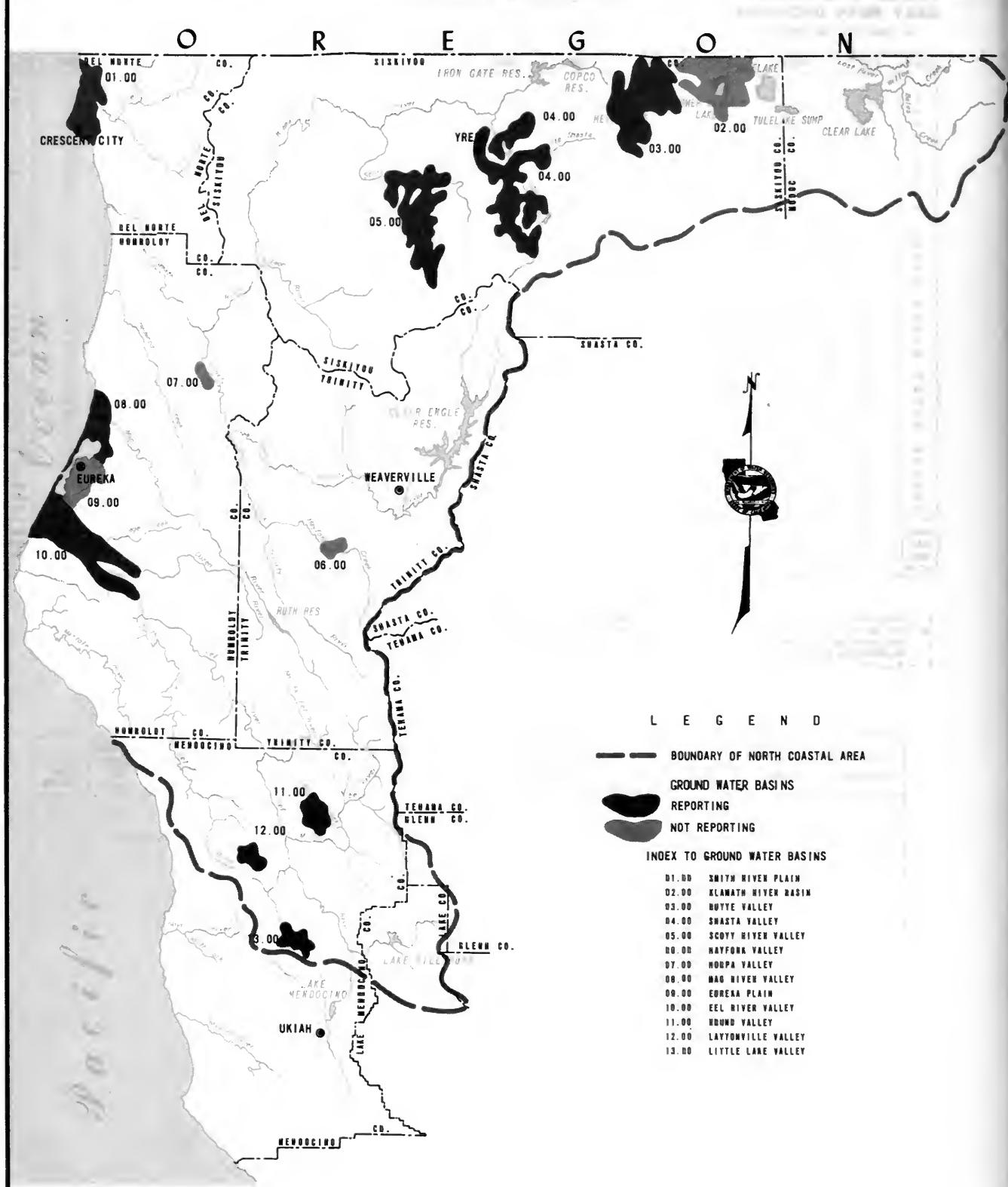
WATER YEAR SUMMARY

— ESTIMATED
 NR — NO RECORD
 * — DISCHARGE MEASUREMENT OR
 OBSERVATION OF NO FLOW
 # — E AND *

MEAN DISCHARGE	MAXIMUM			MINIMUM			TOTAL ACRE FEET	
901	DISCHARGE	GAGE HT.	MO. DAY	TIME	DISCHARGE	GAGE HT.	MO. DAY	TIME
20,000	22.59	1	16	1015	27	5.69	10	5

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. * DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
40 46 55	123 07 40	SW21 34N 11W	35800	27.93	12/22/64	JAN 57-DATE	JAN 57-DATE	1957	0.00	LOCAL	

Station located 1.0 mi. above mouth, 0.6 mi. N of Helena. Stage-discharge relationship affected by ice at times. Drainage area is 151 sq. mi.



APPENDIX C

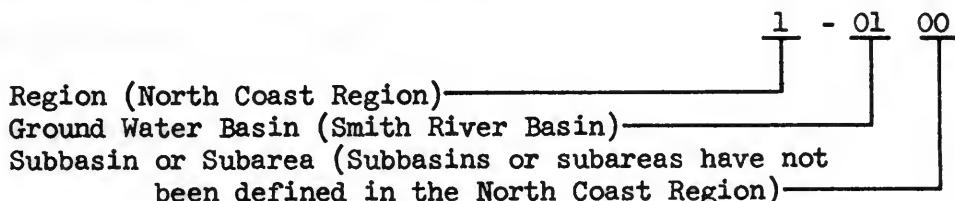
GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 61 wells for the period October 1, 1973 through September 30, 1974. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coastal Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:



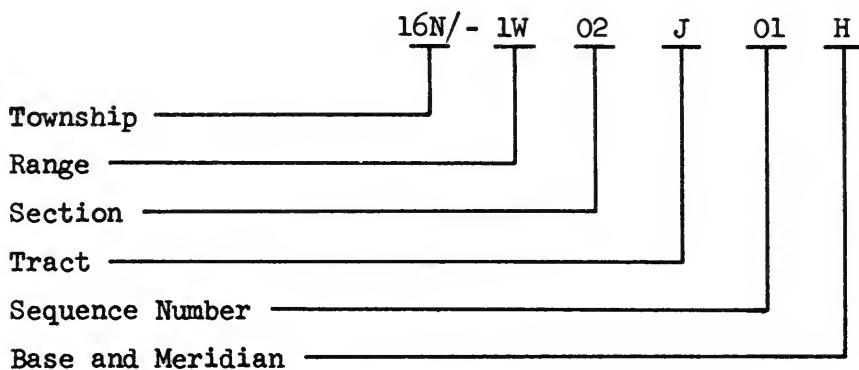
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:



This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1

AVERAGE CHANGE OF GROUND WATER LEVELS
AND SUMMARY OF WELL MEASUREMENTS REPORTED
NORTH COASTAL AREA

<u>Ground Water Basin</u>		<u>Average Change</u>	<u>Measuring to</u>	<u>Number of Wells Reported</u>	
<u>Name</u>	<u>Number</u>	<u>in feet</u>	<u>Agency</u>	<u>Fall 1973</u>	<u>Spring 1974</u>

NORTH COASTAL REGION

Smith River Plain	1-01.00	+1.1	DWR	8	8
Butte Valley	1-03.00	+1.1	DWR	15	15
Shasta Valley	1-04.00	+2.3	DWR	9	9
Scott River Valley	1-05.00	+3.6	DWR	5	5
Mad River Valley	1-08.00	+1.0	DWR	3	3
Eel River Valley	1-10.00	+1.4	DWR	7	7
Round Valley	1-11.00	+0.7	DWR	5	5
Laytonville Valley	1-12.00	+1.3	DWR	4	4
Little Lake Valley	1-13.00	+2.0	DWR	5	5

DWR - Department of Water Resources

TABLE C-2 GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols follows:

State Well Number - Refer to the explanation presented on page 17.

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

(1) Pumping	(6) Other
(2) Nearby pump operating	(7) Recharge operation at or near well
(3) Casing leaking or wet	(8) Oil in casing
(4) Pumped recently	(9) Caved or deepened
(5) Air or pressure gage measurement	

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

(1) Pumping	(6) Well has been destroyed
(2) Pump house locked	(7) Special
(3) Tape hung up	(8) Casing leaking or wet
(4) Cannot get tape in casing	(9) Temporarily inaccessible
(5) Unable to locate well	(0) Measurements discontinued

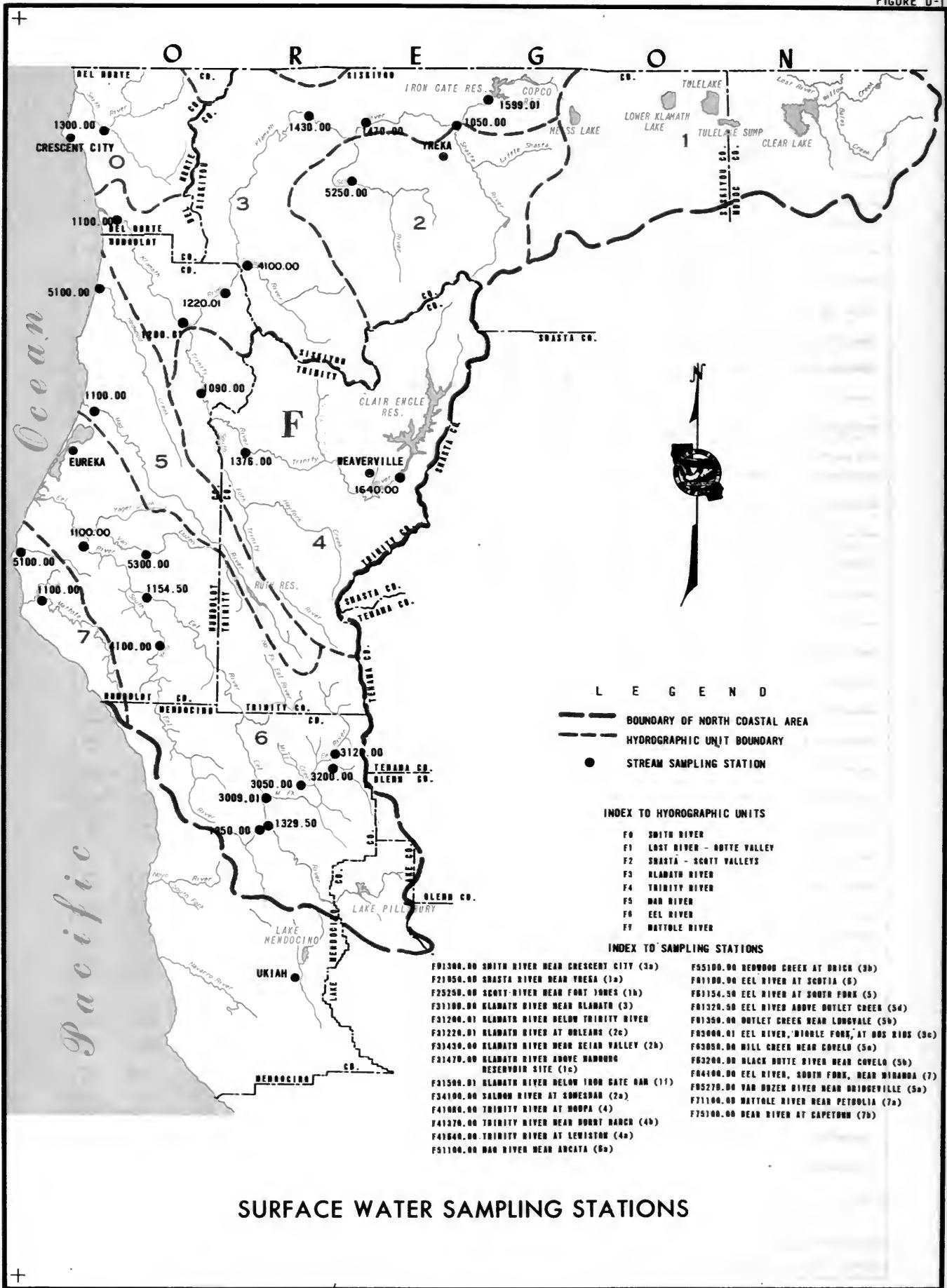
The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

TABLE C-2
GROUND WATER LEVELS AT WELLS
NORTH COASTAL AREA

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA					
SMITH RIVER PLAIN 1-01.00																
16M/01W-02J01 H	127.0	9-24-73 4-17-74	Dry 16.8	110.2	5050 5050	42B/09W-02A02 H	2746.0	10-09-73 4-10-74	12.2 4.0	2733.8 2742.0	5050 5050					
16M/01W-17K01 H	46.0	9-24-73 4-17-74	22.1 9.6	25.9 38.4	5050 5050	43B/09W-27B01 H	2930.0	10-09-73 4-10-74	7.7 3.2	2922.3 2926.8	5050 5050					
17M/01W-02P01 H	31.0	9-24-73 4-17-74	19.0 16.6	12.0 14.4	5050 5050	43B/09W-23P01 H	2728.0	10-09-73 4-10-74	6.7 1.9	2721.3 2726.1	5050 5050					
17M/01W-03B01 H	14.0	9-24-73 4-17-74	13.4 9.7	0.6 4.3	5050 5050	43B/09W-24P01 H	2735.0	10-09-73 4-10-74	(1) 1.8	2733.2	5050					
17M/01W-13M02 H	21.0	9-24-73 4-17-74	16.6 6.6	4.4 14.4	5050 5050	44B/09W-28P01 H	2711.0	10-09-73 4-10-74	26.5 3.0	2684.5 2708.0	5050 5050					
17M/01W-20Q01 H	15.0	9-24-73 4-17-74	6.0 1.5	9.0 13.5	5050 5050	MAD RIVER VALLEY 1-06.00										
17M/01W-27Q05 H	40.0	9-24-73 4-17-74	20.5 10.6	19.5 29.4	5050 5050	06B/01E-07H01 H	11.0	9-25-73 4-16-74	9.4 2.0	1.6 9.0	5050 5050					
18M/01W-27P03 H	15.0	9-24-73 4-17-74	6.5 5.2	8.5 9.8	5050 5050	06B/01E-17D01 H	16.0	9-25-73 4-16-74	14.1 4.5	1.9 11.5	5050 5050					
BUTTE VALLEY 1-03.00																
45W/01W-06A01 H	4258.0	10-10-73 4-11-74	40.8 26.8	4217.2 4231.2	5050 5050	02B/01W-06B01 H	34.0	9-25-73 4-16-74	23.2 11.2	10.8 22.6	5050 5050					
45W/02M-11P01 H	4275.0	10-10-73 4-11-74	54.8 38.7	4220.2 4236.3	5050 5050	03B/01W-18D01 H	15.0	9-25-73 4-16-74	6.0 2.0	9.0 11.0	5050 5050					
46M/01E-06W01 H	4242.0	10-10-73 4-11-74	27.2 20.0	4214.8 4222.0	5050 5050	03B/01W-30B01 H	19.0	9-25-73 4-16-74	17.2 10.2	1.8 8.8	5050 5050					
46B/01W-17B01 H	4246.0	10-10-73 4-11-74	45.2 33.5	4200.8 4212.5	5050 5050	03B/01W-34J01 H	53.0	9-25-73 4-16-74	36.0 29.8	17.0 23.2	5050 5050					
46B/01W-18Q01 H	4247.0	10-10-73 4-11-74	34.5 16.9	4212.5 4230.1	5050 5050	03B/02W-13J01 H	10.0	9-25-73 4-16-74	7.2 3.7	2.8 6.3	5050 5050					
46B/02W-25B02 H	4256.0	10-10-73 4-11-74	39.3 25.5	4216.7 4230.5	5050 5050	03B/02W-26B01 H	12.0	9-25-73 4-16-74	11.0 4.8	1.0 7.2	5050 5050					
46B/02W-26Q01 H	4254.0	10-10-73 4-11-74	22.0 12.0	4232.0 4242.0	5050 5050	03B/02W-35H02 H	11.0	9-25-73 4-16-74	10.8 6.2	2.2 6.6	5050 5050					
47B/01E-06A02 H	4244.5	10-10-73 4-11-74	34.4 30.5	4210.1 4214.0	5050 5050	ROUND VALLEY 1-11.00										
47B/01E-20D01 H	4240.0	10-10-73 4-11-74	25.6 23.6	4214.2 4216.2	5050 5050	22B/12W-04B01 H	1351.0	10-03-73 4-18-74	15.4 5.7	1335.6 1345.3	5050 5050					
47B/01W-04D01 H	4241.5	10-10-73 4-11-74	7.9 (9)	4233.6	5050	22B/12W-06L03 H	1370.0	10-03-73 4-18-74	7.0 -11.1	1363.0 1381.1	5050 5050					
47B/01W-04D02 H	4241.5	10-10-73 4-11-74	8.3 (9)	4233.2	5050	22B/13W-12B01 H	1400.0	10-03-73 4-18-74	29.7 5.1	1370.3 1394.9	5050 5050					
47B/01W-19L01 H	4238.0	10-10-73 4-11-74	6.0 1.7	4232.0 4236.3	5050 5050	23B/13W-36C03 H	1410.0	10-03-73 4-18-74	30.5 8.2	1379.5 1401.8	5050 5050					
47B/01W-27B01 H	4233.0	10-10-73 4-11-74	9.0 6.0	4224.0 4227.0	5050 5050	23B/13W-36Q01 H	1403.0	10-03-73 4-18-74	21.2 -0.5	1381.8 1403.5	5050 5050					
47B/01W-34Q01 H	4237.0	10-10-73 4-11-74	20.2 16.0	4216.8 4221.0	5050 5050	LATONVILLE VALLEY 1-12.00										
48B/01W-26B01 H	4244.0	10-10-73 4-11-74	(2) (2)		5050 5050	21B/14W-30N01 H	1688.0	10-03-73 4-17-74	16.7 3.7	1671.3 1684.3	5050 5050					
SHASTA VALLEY 1-04.00																
42B/05W-20J01 H	2862.0	10-09-73 4-10-74	3.4 4.6	2878.6 2877.4	5050 5050	21B/15W-12M02 H	1630.0	10-03-73 4-17-74	16.7 3.5	1613.3 1626.5	5050 5050					
42B/06W-10J01 H	2835.0	10-09-73 4-10-74	15.7 2.5	2819.3 2832.5	5050 5050	21B/15W-24A01 H	1653.0	10-03-73 4-17-74	11.9 2.2	1641.1 1650.6	5050 5050					
43B/05W-11A01 H	2740.0	10-10-73 4-10-74	127.5 120.5	2612.5 2619.5	5050 5050	LITTLE LAKE VALLEY 1-13.00										
43B/06W-15F03 H	2663.0	10-09-73 4-10-74	11.0 7.4	2652.0 2655.6	5050 5050	18B/13W-06L01 H	1340.0	10-03-73 4-18-74	8.6 1.5	1331.4 1338.5	5050 5050					
43B/06W-22A01 H	2665.0	10-09-73 4-10-74	28.0 6.7	2637.0 2658.3	5050 5050	18B/13W-17J01 H	1370.0	10-03-73 4-18-74	31.2 11.4	1338.0 1356.4	5050 5050					
43B/06W-33C01 H	2810.0	10-09-73 4-10-74	51.2 49.6	2758.8 2760.4	5050 5050	18B/13W-18B01 H	1365.0	10-03-73 4-18-74	26.0 17.8	1339.0 1347.2	5050 5050					
44B/05W-34B01 H	2637.0	10-10-73 4-10-74	28.4 28.0	2608.6 2609.0	5050 5050	19B/13W-32F01 H	1347.0	10-03-73 4-18-74	14.3 3.5	1332.7 1343.5	5050 5050					
44B/06W-10P01 H	2537.0	10-09-73 4-10-74	20.2 24.0	2516.6 2513.0	5050 5050	19B/13W-32L02 H	1350.0	10-03-73 4-18-74	14.3 5.3	1335.7 1345.2	5050 5050					
45B/06W-19B01 H	2538.0	10-09-73 4-10-74	22.0 15.0	2516.0 2523.0	5050 5050											



APPENDIX D
SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1973, through September 30, 1974. The data were collected from 25 stream stations in the North Coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 13th Edition, 1971.

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements".

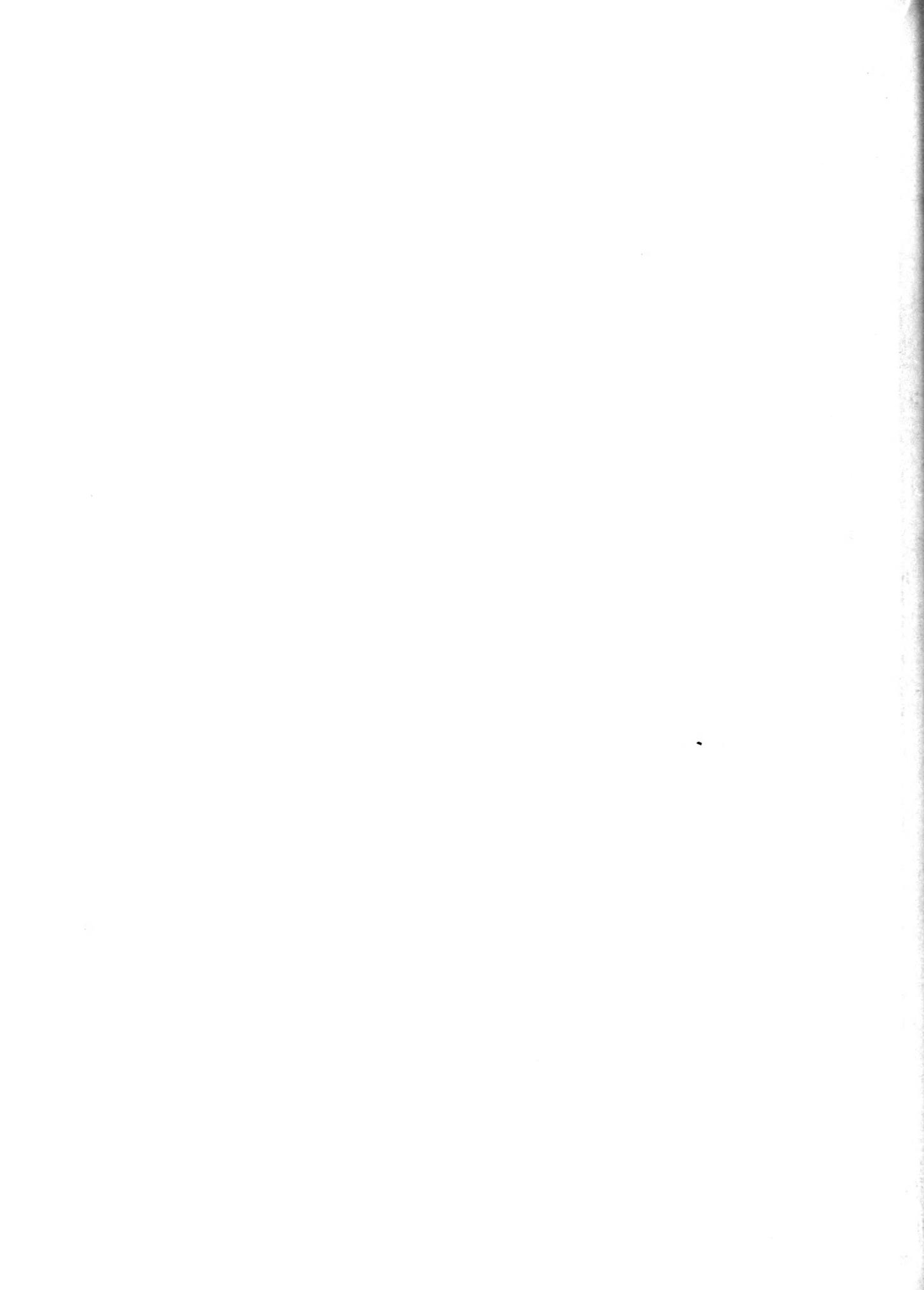


TABLE D-1
SAMPLING STATION DATA AND INDEX
North Coastal Area

Station	Station Number	Location*	Beginning of Record	Frequency of Sampling	Analyses on Page
BEAR RIVER AT CAPETOWN	F75100.00	01N/03W-13 H	MAY 1964	Annually	36
BLACK BUTTE RIVER NEAR COVELO	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	34, 39, 45
EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS	F61329.50	21N/13W-32 M	APR. 1958	Monthly	32, 33, 39, 45
EEL RIVER AT SCOTIA	F61100.00	01N/01E-05 H	APR. 1951	Monthly	31, 32, 37, 39, 41, 45, 47
EEL RIVER AT SOUTH FORK	F61154.50	01S/02E-26 H	APR. 1951	Monthly	32, 39, 45, 47
EEL RIVER, MIDDLE FORK, AT DOS RIOS	F63009.01	21N/13W-06 M	APR. 1958	Monthly	33, 34, 39, 45
EEL RIVER, SOUTH FORK, NEAR MIRANDA	F64100.00	03S/04E-30 H	APR. 1951	Monthly	35, 39, 45
KLAMATH RIVER ABOVE HAMBURG RESERVOIR SITE	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	29
KLAMATH RIVER AT ORLEANS	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	28, 37, 43
KLAMATH RIVER BELOW IRON GATE DAM	F31599.01	47N/05W-20 M	DEC. 1961	Monthly	29, 30, 37, 43
KLAMATH RIVER NEAR KLAMATH	F31100.00	13N/02E-19 H	APR. 1951	Monthly	28, 37, 41, 43, 47
KLAMATH RIVER NEAR SELAD VALLEY	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	28, 29, 37, 43
MAD RIVER NEAR ARCADIA	F51100.00	06N/01E-15 H	NOV. 1958	Bimonthly	31, 37, 43
MATTOLE RIVER NEAR PETROLIA	F71100.00	02S/02W-11 H	JAN. 1959	Annually	35
MILL CREEK NEAR COVELO	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	34, 45
OUTLET CREEK NEAR LONGVALE	F61350.00	20N/14W-01 M	MAY 1958	Monthly	33, 39, 45
REDWOOD CREEK AT ORICK	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	31, 37, 45, 47
SAIMON RIVER AT SOMESBAR	F34100.00	11N/06E-03 H	NOV. 1958	Semiannually	30
SCOTT RIVER NEAR FORT JONES	F25250.00	44N/10W-28 M	DEC. 1958	Bimonthly	27, 37, 43, 47
SHASTA RIVER NEAR YREKA	F21050.00	46N/07W-24 M	DEC. 1958	Bimonthly	27, 37, 43, 47
SMITH RIVER NEAR CRESCENT CITY	F01300.00	16N/01E-10 H	APR. 1951	Monthly	27, 37, 43, 47
TRINITY RIVER AT HOOPA	F41080.00	08N/04E-25 H	APR. 1951	Monthly	30, 37, 43, 47
TRINITY RIVER AT LEWISTON	F41640.00	33N/08W-17 M	APR. 1951	Bimonthly	30, 31, 37, 43
TRINITY RIVER NEAR BURNT RANCH	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	30, 37, 43
VAN DUZEN RIVER NEAR BRIDGEVILLE	F65279.00	01N/02E-12 H	APR. 1958	Monthly	35, 39, 45, 47

* H = Humboldt Base and Meridian
 M = Mount Diablo Base and Meridian

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock.
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum.
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>DEPTH</u>	- Depth at which sample was collected.
<u>DO</u>	- Dissolved oxygen content in milligrams per liter.
<u>SAT</u>	- Percent of normal dissolved oxygen saturation.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) and Celsius (C).
<u>PH</u>	- Measure of acidity or alkalinity of water.
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° C.
<u>SUM</u>	- Total dissolved solids by summation of analyzed constituents.
<u>TH</u>	- Total hardness.
<u>NCH</u>	- Noncarbonate hardness - any excess of total hardness over total alkalinity.
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellege Turbidimeter (E) or a Hach Nephelometer (A). Field determination (F).
<u>SAR</u>	- Sodium adsorption ratio.
<u>PERCENT REACTANCE</u>	
<u>VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

Mineral Constituents

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO ₃	- Carbonate	NO ₃	- Nitrate
F	- Fluoride	SiO ₂	- Silica
HCO ₃	- Bicarbonate	SO ₄	- Sulfate

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLEN LAB	B.H. Q DEPTH	DO SAT	TEMP PH EC	FIELD LABORATORY	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER									
							PERCENT REACTANCE	VALUE	B F SiO ₂	TDS SUM	TH NCH	TURB SAR	REM						
F0 1300.00 SMITH RIVER NEAR CRESCENT CITY																			
10/02/73 0655	5050 5050	8.06 389	12.2 116	55.4F 13.0C	7.4 7.6	141 142	-- --	2.1 .11 7	0 .00 1.31	-- -- --	2.8 .08 --	.00 -- --	74 0.1						
11/14/73 0810	5050 5050	20.95 27500	13.6 12C	50.0F 10.0C	7.4 7.2	78 81	3.5 .17 19	7.7 .63 71	1.9 .01 1	.4 0 0	.46 .75 87	1.8 .04 5	2.4 .07 8	.00 -- --					
12/11/73 0810	5050 5050	14.26 8040	13.5 117	48.2F 9.0C	7.3	78	-- --	-- --	-- --	-- --	-- --	-- --	-- --	12AF					
01/15/74 1300	5050 5050	27.98 63900	13.8 121	49.1F 9.5C	7.6 7.5	63 67	-- --	1.5 .07 10	0 .00 .62	-- -- --	1.0 .03	-- -- --	.00 -- --	31 0.1					
02/05/74 0705	5050 5050	13.25 5060	14.2 114	42.8F 6.0C	7.2	80	-- --	-- --	-- --	-- --	-- --	-- --	-- --	5AF					
03/05/74 0645	5050 5050	14.02 6740	14.0 120	47.3F 8.5C	7.3	73	-- --	-- --	-- --	-- --	-- --	-- --	-- --	5AF					
04/02/74 0700	5050 5050	20.94 26300	13.7 116	46.4F 8.0C	7.4 8.0	66	-- --	1.6 .07 10	0 .00 .59	-- -- --	2.0 .06	-- -- --	.00 -- --	32 0.1					
05/14/74 0705	5050 5050	9.71 1580	12.3 109	50.0F 10.0C	7.4	91	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF					
06/11/74 0735	5050	8.99 1040	9.6 98	61.7F 16.5C	7.6	101	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF					
07/09/74 0635	5050	8.35 610	9.9 104	64.4F 18.0C	7.8	126	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF					
08/06/74 0720	5050	7.73 293.		68.0F 20.0C	7.5	147	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF					
09/04/74 0655	5050	7.56 238	9.0 97	66.2F 19.0C	7.5	154	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF					
F2 1050.00 SHASTA RIVER NEAR YREKA																			
11/15/73 0930	5050 5050	3.76 304	12.9 119	48.2F 9.0C	8.1	507	-- --	-- --	-- --	-- --	-- --	-- --	-- --	5AF					
01/14/74 1305	5050 5050	4.80 740	11.4 100	44.6F 7.0C	8.2	354	23 1.15 29	22 1.81 46	21 .91 23	2.5 .06 2	0 .00 3.23 83	197 .25 6	12 .31 8	11 .08 2	207 193	148 0	300A 0.8		
03/15/74 0905	5050 5050	4.41 564	11.5 106	48.2F 9.0C	8.1	445	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	8AF				
05/07/74 1120	5050 5050	3.68 272	9.8 111	65.3F 18.5C	8.2	410	-- --	-- --	21 .91 21	0 .00 3.90	238 3.90	-- --	12 .34	-- --	.30 --	176 --	3A 0.7		
07/16/74 1230	5050	3.03 77	10.8 131	71.6F 22.0C	8.2	556	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF			
09/13/74 0820	5050	3.05 81	9.4 98	58.1F 14.5C	8.1	581	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	2AF			
F2 5250.00 SCOTT RIVER NEAR FORT JONES																			
11/15/73 1230	5050 5050	8.39 1810	12.8 115	44.6F 7.0C	7.2	109	9.0 .45 39	7.2 .59 52	2.0 .09 8	.4 .01 1	0 .00 1.00	61 .04 4	2.1 .05 5	1.8 .02 2	.00 -- --	80 52	164 2	E 1	
01/14/74 1525	5050 5050	9.57 2780	12.3 105	41.0F 5.0C	7.1	123	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	80AF			
03/15/74 1145	5050 5050	8.02 1660	11.6 109	48.2F 9.0C	7.6	199	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	30AF			
05/07/74 1430	5050 5050	9.51 2850	10.5 107	54.5F 12.5C	7.5	106	-- --	-- --	1.7 .07 6	0 .00 1.00	61 -- 1.00	-- -- --	.0 .00 --	-- -- --	.00 -- --	51 --	36A 0.1		
07/16/74 1505	5050	12.00 314	10.0 145	68.9F 20.5C	8.0	231	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF		
09/13/74 1100	5050 5050	5.22 74	10.9 124	63.5F 17.5C	8.1	308	33 1.65 49	18 1.48 44	5.0 .22 7	.9 .02 1	0 .00 2.97 90	181 5 5	8.6 .10 5	3.4 .10 3	3.8 .06 2	.10 -- --	168 162	156 8	0A 0.2

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
							100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
F3 1100.00 Klamath River Near Klamath																								
10/02/73 0810	5050 5000	4.69 2580	10.8 10 ⁹	59.0F 15.5C	7.8 8.1	219 216	21 1.05 46 33 19	9.1 .75 .42 2	9.7 .42 .04 2	1.6 .04 0.00	0 1.84 81	112 .31 14	15 .13 6	4.6 .13	-- --	.09 17.0	.2 133	134 133	90 0	14 0.4				
11/13/73 1635	5050 5000	12.4 97600	12.4 10 ⁷	48.2F 9.0C	7.3 103	102 103	11 .55 51	4.7 .39 .12	2.7 .12 .02	.8 0.00	0 1.93 87	57 .11 10	5.1 .03 3	1.0 .05 4	-- --	.02 13.0	.0 66	67 66	47 1	1004 0.2				
12/11/73 0935	5050 5000	12.9 36700	12.9 10 ⁵	43.7F 6.5C	7.4 127	13 1.65 51	5.4 .44 .34	4.0 .17 .12	.7 .02 .02	0 1.00 80	70 1.15 88	5.5 .11 8	1.8 .05 4	-- --	.03 16.0	.1 81	82 81	55 0	504 0.2					
01/15/74 0935	5050 5000	12.9 136000	12.9 10 ⁹	46.4F 8.0C	8.0 95	11 .55 53	4.1 .34 .32	2.7 .12 .02	.7 0.00 86	0 1.00 9	49 .80 86	3.7 .08 9	1.6 .05 5	-- --	.03 12.0	.0 60	61 60	44 5	2004 0.2					
02/05/74 0855	5050 5000	13.1 35600	13.1 10 ⁵	42.8F 6.0C	7.5 144	14 1.70 48	6.4 .53 .36	4.9 .21 .14	.9 .02 1	-- 1.00 12	78 1.28 12	5.6 .12 0.07	2.6 .07 7	-- --	.03 18.0	.1 92	61 61	704 0.3						
03/05/74 0835	5050 5000	13.2 46000	13.2 111	46.4F 8.0C	7.7 148	16 .80 51	6.7 .55 .35	4.2 .18 .12	1.0 .02 2	-- 1.00 14	76 1.25 14	6.9 .14 0.06	2.1 .06 5	-- --	.03 17.0	.1 93	68 68	804 0.2						
04/02/74 0845	5050 5000	13.1 180000	13.1 110	46.4F 8.0C	7.9 152	13 .65 52	5.1 .42 .34	3.3 .14 .03	1.0 .02 2	-- 1.00 11	60 .98 10	4.6 .06 0.06	2.0 .06 6	-- --	.03 13.0	.1 73	54 54	1004 0.2	X					
05/14/74 0915	5050 5000	11.5 24500	11.5 10 ⁵	52.7F 11.5C	6.3 122	13 .65 51	5.4 .44 .34	3.8 .17 .02	.9 0.02 2	-- 1.00 13	67 1.10 14	6.9 .14 0.06	2.2 .06 6	-- --	.03 14.0	.0 80	55 55	304 0.2						
06/11/74 0910	5050 5000	9.3 94	9.3 17.0C	62.6F 17.0C	7.4 107	12 .60 50	5.3 .44 .37	2.9 .13 .02	.8 0.02 2	-- 1.00 11	61 1.00 10	4.6 .10 0.05	1.6 .05 5	-- --	.03 12.0	.0 70	52 52	204 0.2						
07/09/74 0750	5050 5000	8.9 92	8.9 17.0C	62.6F 17.0C	7.5 149	17 .85 50	6.5 .53 .31	6.9 .30 .03	1.0 .02 2	-- 1.00 18	84 1.38 16	7.8 .16 0.06	2.3 .06 6	-- --	.03 14.0	.0 97	69 69	14 0.4						
08/06/74 0830	5050 5000	215.3F 101.7C	76.0 7.6	7.6 175n	175n	20 1.00	7.6 .63 .32	6.3 .27 .05	1.8 .05 3	-- 1.00 14	100 1.64 18	8.5 .18 11	4.0 .11 1	-- --	70.0 16.0	.1 114	81 81	24 0.3	X					
09/04/74 0810	5050 5000	8.5 93	8.5 20.0C	68.0F 20.0C	7.9 206	22 1.10	7.2 .59 .28	9.2 .40 .04	1.6 .04 2	-- 1.00 2	110 1.80 21	10 .21 12	4.4 .12 0.08	-- --	.08 18.0	.1 127	85 85	24 0.4						
F3 1220.01 Klamath River at Orleans																								
10/01/73 1105	5050 5050	0.58 1650	12.0 124	61.7F 16.5C	7.9 230	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	14F		
11/13/73 1205	5050 5050	13.80 33600	13.1 112	46.4F 8.0C	7.3 105	11 .55 50	4.5 .37 .34	3.4 .15 .03	1.2 .03 3	0 0.00	54 .89 85	6.6 .14 13	.5 .01 1	.6 .01 1	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	E	
12/10/73 1225	5050 5050	10.28 19000	14.5 121	44.6F 7.0C	7.4 128	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	25AF		
01/14/74 1245	5050 5050	10.86 50000	14.2 118	44.6F 7.0C	8.2 112	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	90AF		
02/04/74 1145	5050 5050	11.61 21300	14.2 114	41.9F 5.5C	7.7 147	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	40AF		
03/04/74 1255	5050 5050	11.56 19500	14.5 127	45.5F 7.5C	7.5 160	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	41AF		
04/01/74 1145	5050 5050	19.72 75000	13.3 113	46.4F 8.0C	7.7 111	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	50 0.3		
05/13/74 1120	5050 5050	9.93 16100	12.1 112	52.7F 11.5C	7.5 110	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	22AF		
06/10/74 1055	5050 5050	8.32 11700	10.0 100	59.0F 15.0C	7.8 98	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	4AF		
07/08/74 1210	5050 5050	4.43 4120	9.5 99	62.6F 17.0C	7.7 144	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	2AF		
08/05/74 1140	5050 5050	2.81 2500	9.3 23	74.3F 23.5C	7.9 178	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF		
09/03/74 1050	5050 5050	2.40 2250	9.3 109	73.4F 23.0C	7.9 205	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	1AF		
F3 1430.00 Klamath River Near Seiad Valley																								
10/15/73 1120	5050 5050	13.4 1530	13.7 137	58.1F 14.5C	8.0 7.8	274 278	-- --	21 .91 34	-- --	0 .00 2.21	135 2.21	-- --	6.9 .19	-- --	.10 --	-- --	90 90	14 1.0						
11/15/73 1105	5050 5050	13.0 6130	11.6 99	47.3F 8.0C	8.1 8.1	181 180	14 .70 37	9.2 .76 .21	9.4 .61 .04	1.4 .02 2	0 .00 1.52	93 64	8.2 .17 9	4.3 .12 7	-- --	.10 --	-- --	120 92	73 0	13A 0.5	T			

TABLE B-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER			
							PERCENT MILLIEQUIVALENTS PER LITER	REACTANCE VALUE	B SiO ₂	F TDS SUM	TH NCH	TURB SAR	REM	
F3 1430.00 Klamath River Near Seiad Valley														
12/04/73 1325	5050 5050	6780	12.9 108	42.8F 6.8C	7.5	197	--	--	--	--	--	--	--	--
01/14/74 1425	5050 5050	12300	12.5 102	41.0F 5.0C	7.4	160	--	--	8.4 .37 23	0 .00	82 1.34	--	2.5 .07	.10
02/05/74 1210	5050 5050	8930	14.1 115	41.0F 5.0C	7.5	189	--	--	--	--	--	--	--	--
03/15/74 1030	5050 5050	9760	12.6 108	44.6F 7.0C	7.8	213	--	--	--	--	--	--	--	--
04/16/74 1100	5050 5050	12700	11.7 107	49.1F 9.5C	7.9	178	--	--	--	--	--	--	--	--
05/07/74 1320	5050 5050	9430	10.9 110	57.2F 14.0C	8.4	7.7	143	--	5.8 .25 .17	0 .00	77 1.26	--	.5 .01	.00
06/05/74 1110	5050	5570	9.6 95	55.4F 13.0C	7.9	127	--	--	--	--	--	--	--	--
07/16/74 1400	5050	1670	11.3 129	68.0F 20.0C	8.2	209	--	--	--	--	--	--	--	--
08/14/74 1130	5050	1420	10.2 118	68.9F 20.5C	8.2	203	--	--	--	--	--	--	--	--
09/13/74 1000	5050	1680	9.9 106	62.6F 17.0C	8.2	234	--	--	--	--	--	--	--	--
F3 1470.00 Klamath River Above Hamburg Reservoir Site														
11/15/73 1020	5050 5050	2120E	12.5 112	47.3F 8.5C	7.8	252	--	--	--	--	--	--	--	--
01/14/74 1350	5050 5050	4660E	13.8 109	38.3F 3.5C	7.4	202	--	--	--	--	--	--	--	--
03/15/74 0950	5050 5050	5680E	12.6 108	42.8F 6.0C	7.9	228	--	--	--	--	--	--	--	--
05/07/74 1220	5050 5050	3510E	10.9 111	57.2F 14.0C	8.0	7.5	168	--	11 .48 .27	0 .00	87 1.43	--	2.6 .07	.10
07/16/74 1315	5050	812E	11.0 132	71.6F 22.0C	8.2	220	--	--	--	--	--	--	--	--
09/13/74 0910	5050	1420E	8.8 99	64.4F 18.0C	8.0	233	--	--	--	--	--	--	--	--
F3 1599.01 Klamath River Below Iron Gate Dam														
10/15/73 0945	5050 5050	1340	10.1 105	57.2F 14.0C	7.5	250	--	--	--	--	--	--	--	--
11/15/73 0845	5050 5050	1820	8.0 74	48.2F 9.0C	6.9	194	--	--	--	--	--	--	--	--
12/04/73 1140	5050 5050	3390	12.3 103	41.0F 5.0C	7.9	184	--	--	--	--	--	--	--	--
01/14/74 1230	5050 5050	3920	13.5 107	37.4F 3.0C	7.2	183	--	--	--	--	--	--	--	--
02/05/74 0950	5050 5050	5050	14.4 118	39.2F 4.0C	7.2	153	--	--	--	--	--	--	--	--
03/15/74 0015	5050 5050	5120	13.7 127	48.2F 9.0C	7.6	201	--	--	--	--	--	--	--	--
04/16/74 0920	5050 5050	6460	12.6 117	48.2F 9.0C	7.7	143	--	--	--	--	--	--	--	--
05/07/74 1030	5050 5050	3240	10.6 110	57.2F 14.0C	7.6	146	--	--	11 .48 .34	0 .00	67 1.10	--	1.4 .04	.10
06/05/74 0930	5050	845	8.6 94	61.7F 16.5C	8.2	145	--	--	--	--	--	--	--	--
07/16/74 1200	5050	735	13.7 161	68.0F 20.0C	8.3	166	--	--	--	--	--	--	--	--

TABLE D-2 cont'
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD PH EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER								
							PERCENT REACTANCE VALUE	NO. 3	B SiO ₂	F SiO ₂ SUM	TDS NCH	TH TURB SAR	REM					
F3 1599.01 KLAHATH RIVER BELOW IRON GATE DAM																		
08/14/74 0955	5050		8.8 105	69.8F 21.0C	8.3	156	--	--	--	--	--	--	--	2AF				
09/13/74 0745	5050		7.0 79	64.4F 18.0C	7.6	203	--	--	--	--	--	--	--	2AF				
F3 4100.00 SALMON RIVER AT SOMESBAR																		
10/01/73 1145	5050	200	12.5 127	59.9F 15.5C	8.1	141	--	--	--	--	--	--	--	1AF				
06/10/74 1135	5050 5050	3720	10.7	54.5F 12.5C	7.2	49	6.6 .33 .66	1.3 .11 .22	1.2 .05 .10	.4 .01 .2	0 .00	.26 .43 .96	.8 .02 .4	.00 .00 .00	37 23	22 1	5A 0.1	ET S
F4 1080.00 TRINITY RIVER AT HOOPA																		
10/01/73 1005	5050 5050	14.28 603	10.9 117	61.7F 16.5C	7.8	199	--	--	--	--	--	--	--	--	--	--	--	1AF
11/13/73 1305	5050 5050	25.09 22300	12.1 107	49.1F 9.5C	7.4	117	16 .80 .63	4.1 .34 .27	2.5 .11 .9	.8 .02 .2	0 .00	64 1.05 .88	4.9 .10 .8	1.4 .04 .3	.00 .00 .00	75 61	57 5	130A 0.1
12/10/73 1115	5050 5050	19.97 7300	13.2 112	46.4F 8.0C	7.4	135	--	--	--	--	--	--	--	--	--	--	--	39AF
01/14/74 1130	5050 5050	16.72 10000E	13.2 112	46.4F 8.0C	7.5	135	--	--	--	--	--	--	--	--	--	--	--	105AF
02/04/74 1035	5050 5050	19.74 9000	13.8 113	43.7F 6.5C	8.3	144	--	--	--	--	--	--	--	--	--	--	--	52AF
03/04/74 1145	5050 5050	22.39 14500	13.5 116	47.3F 6.5C	7.7	148	--	--	--	--	--	--	--	--	--	--	--	81AF
04/01/74 1040	5050 5050	31.84 48700	12.9 108	45.5F 7.5C	8.3	111	--	--	2.2 .10	--	0 .00	63 1.03	--	1.6 .05	--	.00 .00	--	46 360A 0.1
05/13/74 1005	5050 5050	18.37 8000	11.4 104	51.8F 11.0C	7.6	124	--	--	--	--	--	--	--	--	--	--	--	18AF
06/10/74 0935	5050	16.94 3800	9.4 96	61.2F 16.2C	7.6	126	--	--	--	--	--	--	--	--	--	--	--	8AF
07/08/74 1110	5050		9.5 101	64.4F 18.0C	7.9	163	--	--	--	--	--	--	--	--	--	--	--	1AF
08/05/74 1040	5050 5050	14.03 900		71.6F 22.0C	7.4	175	--	--	3.7 .16 9	--	0 .00	94 1.54	--	3.8 .11	--	.00 .00	--	63 1A 0.2
09/03/74 0955	5050	13.79 580	9.7 107	68.0F 20.0C	8.0	204	--	--	--	--	--	--	--	--	--	--	--	1AF
F4 1376.00 TRINITY RIVER NEAR BURNT RANCH																		
11/13/73 1030	5050 5050	11.6 5200	10.1 101	48.2F 9.0C	7.1	99	--	--	--	--	--	--	--	--	--	--	--	30AF
01/14/74 1025	5050 5050	12.8 3270	10.8 108	44.6F 7.0C	7.4	139	--	--	--	--	--	--	--	--	--	--	--	15AF
03/04/74 1030	5050 5050	13.5 4482	11.5 114	44.6F 7.0C	7.5	154	--	--	--	--	--	--	--	--	--	--	--	20AF
05/13/74 0905	5050 5050	11.8 3170	11.0 110	51.8F 11.0C	7.4	100	--	--	2.7 .12 12	--	0 .00	56 .92	--	1.4 .04	--	.00 .00	--	46 11A 0.2
07/08/74 1010	5050	9.7 4950	10.2 102	61.7F 16.5C	7.9	120	--	--	--	--	--	--	--	--	--	--	--	1AF
09/03/74 0955	5050	9.1 356	10.3 103	68.0F 20.0C	8.2	158	--	--	--	--	--	--	--	--	--	--	--	1AF
F4 1640.00 TRINITY RIVER AT LEWISTON																		
11/13/73 0845	5050 5050	3.43 320E	10.3 92	46.4F 8.0C	8.0	87	--	--	--	--	--	--	--	--	--	--	--	13AF
01/14/74 0825	5050 5050	3.07 171	11.8 104	45.5F 7.5C	7.4	82	--	--	--	--	--	--	--	--	--	--	--	8AF
03/04/74 0800	5050 5050	3.36 276	12.6 110	44.6F 7.0C	7.1	76	--	--	1.7 .07 9	--	0 .00	42 .69	--	1.7 .05	--	.00 .00	--	35 37A 0.1

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP PH EC	FIELD LABORATORY	MINERAL CONSTITUENTS IN CA MO NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER				
							PERCENT REACTANCE VALUE	MILLIEQUIVALENTS PER LITER	H SiO ₂	F	TDS SUM	TH NCH	TURB SAH	
F4 1640.00 TRINITY RIVER AT LEWISTON														
05/13/74 0715	5050 5050	5.09 1300	13.0 116	46.4F 8.0C	7.6	74	--	--	--	--	--	--	--	
05/16/74 1235	5050 5050	5.40 120	13.2 8.5C	47.3F 7.4	7.3	71	3.6 0.18 23	6.3 0.52 66	1.6 0.07 9	.9 0.02 3	0 0.00	.44 .72 97	.6 .01 1	
07/08/74 0730	5050	3.06 162	9.4 87	49.1F 9.5C	7.4	77	--	--	--	--	--	--	--	
09/03/74 0725	5050	3.28 215	11.6 105	47.3F 8.5C	8.1	76	--	--	--	--	--	--	--	
CONTINUED														
F5 1100.00 MAD RIVER NEAR ARCATA														
11/13/73 1455	5050 5050	12.78 1300	11.6 103	50.0F 17.0C	7.4	85	14 .70 69	1.2 .10 .15	3.5 .07 15	2.9 .00 7	0 0.00	.45 .74 77	7.6 .16 .17	
01/15/74 0730	5050 5050	12.4 18700	50.0F 10.0C	7.3	77	77	--	--	2.7 .12 12	--	0 .00	50 .82	--	.00 .01 .20
03/04/74 1500	5050 5050	8.52 4400	13.1 110	46.4F 8.0C	7.4	93	--	--	--	--	--	--	--	--
05/13/74 1350	5050 5050	4.49 276	11.5 116	60.8F 16.0C	8.2	15A	--	--	4.4 .19 12	--	0 .00	80 1.31	--	1.9 .05 .00
07/08/74 1415	5050	9.6 34	62.6F 99	7.9	217	--	--	--	--	--	--	--	--	--
09/03/74 1320	5050	10.6 47	69.8F 118	8.2	197	--	--	--	--	--	--	--	--	--
F5 5100.00 REDWOOD CREEK AT ORICK														
10/01/73 1430	5050 5050	5.06 64	10.8 115	65.3F 18.5C	7.4	220	--	--	6.4 .28 13	--	0 .00	89 1.46	--	5.0 .14 .10
11/13/73 1545	5050 5050	12.65 1n500	12.1 107	50.0F 1n0C	7.3	63	8.9 .44 64	1.0 .08 12	2.8 .12 7	2.0 .05 00	0 0.00	26 .43 63	8.4 .17 25	2.6 .07 .01 .00
12/11/73 1030	5050 5050	8.75 2800	12.7 110	48.2F 9.0C	7.2	70	--	--	--	--	--	--	--	--
01/15/74 0830	5050 5050	11.10 6730	12.0 107	50.9F 10.5C	8.4	63	--	--	2.7 .12 19	--	0 .00	27 .44	--	1.6 .05 .10
02/04/74 1420	5050 5050	2.76 1500E	12.5 108	48.2F 9.0C	7.3	81	--	--	--	--	--	--	--	--
03/04/74 1600	5050 5050	8.89 2930	13.0 112	48.2F 9.0C	7.1	71	--	--	--	--	--	--	--	--
04/01/74 1435	5050 5050	16.93 24200	12.3 107	49.1F 9.5C	7.4	80	--	--	3.0 .13 18	--	0 .00	27 .44	--	2.5 .07 .10
05/13/74 1450	5050 5050	6.14 317	11.0 109	59.0F 15.0C	7.4	118	--	--	--	--	--	--	--	--
06/10/74 1435	5050	5.76 165	10.0 111	69.8F 21.0C	8.4	143	--	--	--	--	--	--	--	--
07/09/74 0840	5050	5.52 105	9.2 91	59.0F 15.0C	7.2	162	--	--	--	--	--	--	--	--
08/05/74 1445	5050	5.14 40		62.6F 17.0C	7.4	161	--	--	--	--	--	--	--	--
09/03/74 1415	5050	5.00 23	10.7 117	68.0F 20.0C	7.9	160	--	--	--	--	--	--	--	--
F6 1100.00 EEL RIVER AT SCOTIA														
10/02/73 1150	5050 5000	9.35 123	12.2 123	60.8F 16.0C	7.9	304	37 1.05 58	11 .90 28	9.2 .40 13	1.4 .04 1	0 .00	151 2.47 78	24 .50 16	6.8 .19 6
11/14/73 1400	5050 5000	71400	12.1 112	53.6F 12.0C	7.9	109	14 .70 58	3.6 .30 25	3.9 .17 14	1.1 .03 3	0 .00	59 .97 84	5.6 .12 5	2.3 .06 .1
12/11/73 1415	5050 5000	12.5 14000	12.5 108	48.2F 9.0C	7.4	138	19 .95 61	4.7 .39 25	4.9 .21 13	.8 .02 1	0 .00	69 1.13 80	8.6 .18 13	4.0 .04 8
01/16/74 0905	5050 5000	12.5 321000	12.5 112	50.9F 10.5C	7.6	96	11 .55 55	3.0 .25 25	4.0 .17 17	1.2 .03 3	0 .00	53 .87 87	4.1 .09 9	1.5 .04 4

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLE LAB	G.H. Q DEPTH	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER								
							MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				B	F	TDS SUM	TH NCH	TURB SAR
F6 1100.00 EEL RIVER AT SCOTIA																	CONTINUED		
02/05/74 1600	5050 5000	8700 8700	12.1 103	47.3F 8.5C	7.6 164	19 .95 57 28 14 1	5.7 .47 28 14 1	5.3 .23 14 1	.9 .02 1	-- 1.34 --	82 .19 --	9.1 .19 --	2.6 .07 --	-- .05 --	.1 12.0 --	96 71 --	80A 0.3 --		
03/05/74 1335	5050 5000	24800 98200	12.3 105	47.3F 8.5C	7.6 149	18 .90 57 28 13 2	5.3 .44 28 13 2	4.6 .20 13 2	1.0 .03 2	-- 1.25 --	76 .15 --	7.0 .15 --	2.5 .07 --	-- .04 --	.1 12.0 --	89 67 --	100A 0.2 --		
04/02/74 1245	5050 5000	98200 11300	12.3 109	50.0F 10.0C	8.0 108	13 .65 59 24 15 3	3.2 .26 16 15 3	3.6 .16 15 3	1.0 .03 3	-- -.93 --	57 .10 --	4.9 .10 --	1.7 .05 --	-- .04 --	.1 9.7 --	67 46 --	600A 0.2 --		
05/14/74 1245	5050 5000	11300 113	11.0 17.0	62.6F 17.0C	8.3 183	23 1.15 60 27 11 2	6.3 .52 22 11 2	5.1 .22 22 11 2	1.0 .03 2	-- 1.61 --	98 .25 --	12 .25 --	3.0 .08 --	-- .07 --	.1 11.0 --	110 84 --	10A 0.2 --		
06/11/74 1255	5050 5000	8.8 1050	73.4F 23.0C	7.9 227	29 1.45 61 27 11 1	7.7 .63 26 11 1	5.9 .26 26 11 1	1.3 .03 1	-- 1.98 --	121 .27 --	13 .10 --	3.4 .10 --	-- .09 --	.1 9.5 --	130 100 --	1A 0.3 --			
07/09/74 1230	5050 5000	540 109	68.0F 20.0C	8.1 279	41 2.05 64 25 9 1	9.8 .81 30 9 1	7.0 .30 30 9 1	1.4 .04 1	-- 2.54 --	155 .40 --	19 .40 --	4.3 .12 --	-- .11 --	.1 10.0 --	170 140 --	1A 0.3 --			
08/06/74 1225	5050 5000	240 108	70.7F 21.5C	7.9 296	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	0AF --			
09/04/74 1210	5050 5000	150 108	64.4F 18.0C	8.0 317	39 1.95 60 25 13 1	10 .82 43 13 1	9.8 .43 04 13 1	1.5 .04 04 13 1	-- 2.77 --	169 .42 --	20 .18 --	6.3 .18 --	-- 140 8.4 --	.1 8.4 --	179 140 --	1A 0.4 --			
F6 1154.50 EEL RIVER AT SOUTH FORK																	E T S		
10/02/73 1245	5050 5050	74E 74E	12.0 125	63.5F 17.5C	7.9 297	-- --	8.7 .38 13	-- 0.00	0 2.21	-- --	6.3 .18	-- --	.20 --	-- --	-- --	130 0.3 --	0A --		
11/14/73 1500	5050 5050	30400E 30400E	12.6 114	51.8F 11.0C	8.3 8.0	105 121	17 .85 65 19	3.0 .25 12	2.1 .05 4	0 0.00	63 1.03 86	7.4 .15 13	.5 .01 1	.6 .01 1	.10 --	-- 65 --	96 55 4 320A 0.2 --		
12/11/73 1510	5050 5050	7670E 7670E	12.6 109	44.2F 9.0C	7.5 132	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	54AF --			
02/06/74 0840	5050 5050	1200E 105	42.4F 6.0C	7.6 162	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	59AF --			
03/05/74 1430	5050 5050	12300E 117	49.1F 9.5C	7.9 133	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	162AF --			
04/02/74 1340	5050 5050	42500E 112	50.0F 10.0C	8.2 108	-- --	-- --	3.4 .15 13	-- 0.00	0 .97	-- --	.9 .03	-- --	.10 --	-- --	-- --	49 650A 0.2 --			
05/14/74 1350	5050 5050	1880 106	62.6F 17.0C	7.7 170	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	15AF --			
06/11/74 1315	5050 5050	636 98	8.3 24.0C	7.0 202	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	24F --			
07/09/74 1335	5050 5050	220 101	69.8F 21.0C	8.0 271	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	14F --			
08/06/74 1315	5050 5050	96 105	73.4F 23.0C	8.0 285	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	14F --			
09/04/74 1255	5050 5050	48 105	69.8F 21.0C	7.8 304	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	14F --			
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																	E T S		
10/03/73 0845	5050 5050	4.8 119	60.6F 16.0C	8.0 252	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	0AF --			
11/15/73 1200	5050 5050	4850 107	53.6F 12.0C	7.9 120	14 .70 57	4.1 .34 28	3.9 .17 14	.9 .02 2	0 0.00	61 1.00 82	8.9 .19 16	.9 .03 2	-- --	.10 --	-- 75 63	52 2 110A 0.2 --			
12/12/73 0945	5050 5050	2090 111	46.4F 8.0C	7.5 120	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	31AF --			
01/23/74 1040	5050 5050	3820 108	44.6F 7.0C	7.4 111	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	144AF --			
02/06/74 1205	5050 5050	1120 109	41.9F 5.5C	8.2 132	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	69AF --			
03/06/74 1045	5050 5050	3240 109	50.0F 16.0C	7.1 158	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	63AF --			
04/03/74 0810	5050 5050	8290 109	46.4F 8.0C	7.6 103	-- --	-- --	3.7 .16	-- 0.00	0 .90	-- --	55 .50 --	-- --	1.2 .03 --	-- .00 --	-- --	46 270A 0.2 --			

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	NO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HC ₀₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER			
							PERCENT REACTANCE VALUE	8 SI ₀₂	F SUM	TDS NCH	TH SAR	REM		
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS														
05/15/74 0805	5050		10.2	59.0F	7.9	183	--	--	--	--	--	--	--	--
	5050	311	104	15.0C										6AF
06/12/74 0815	5050		8.0	74.3F	7.9	229	--	--	--	--	--	--	--	--
		115	97	23.5C										1AF
07/10/74 0745	5050		8.4	68.0F	8.0	233	--	--	--	--	--	--	--	--
		95	95	20.0C										1AF
08/07/74 0755	5050			71.6F	7.9	236	--	--	--	--	--	--	--	--
		12		22.0C										1AF
09/05/74 0720	5050		7.1	68.0F	8.2	229	--	--	--	--	--	--	--	--
		7.5	80	20.0C										0AF
F6 1350.00 OUTLET CREEK NEAR LONGVALE														
10/03/73 0825	5050	1.05	10.1	57.2F	7.9	357	--	--	--	--	--	--	--	--
	5050	1.2	101	14.0C										1AF
11/15/73 1225	5050	5.12	11.2	53.6F	8.4	81	6.9	4.1	4.2	1.0	0	42	3.4	
	5050	1590	107	12.0C	7.1	84	.34	.34	.20	.03	.00	.69	.07	.10
							38	38	20	3	0	A1	8	61
													9	34
													0	0.3
12/12/73 0920	5050	4.05	12.4	48.2F	7.3	92	--	--	--	--	--	--	--	--
	5050	888	111	9.0C										
01/23/74 1015	5050	3.75	12.8	44.6F	7.2	98	--	--	--	--	--	--	--	--
	5050	718	109	7.0C										18AF
02/06/74 1145	5050	2.94	13.4	41.0F	7.6	120	--	--	--	--	--	--	--	--
	5050	344	108	5.0C										7AF
03/06/74 1105	5050	3.97	12.5	50.0F	7.3	101	--	--	--	--	--	--	--	--
	5050	842	114	10.0C										14AF
04/03/74 0740	5050	11.9	48.2F	7.3	75	--	--	3.5	--	0	39	--	2.8	
	5050	2760	106	9.0C	8.0		.15	.19	.00	.64		.00	.10	32
													0	95A
													0	0.3
05/15/74 0740	5050	3.34	10.1	59.0F	7.6	187	--	--	--	--	--	--	--	--
	5050	513	103	15.0C										1AF
06/12/74 0755	5050	2.61	7.3	71.6F	7.9	234	--	--	--	--	--	--	--	--
		230	86	22.0C										1AF
07/10/74 0725	5050	2.75	7.7	66.2F	8.1	268	--	--	--	--	--	--	--	--
		275	85	19.0C										1AF
08/07/74 0735	5050	2.48	192	73.4F	8.0	275	--	--	--	--	--	--	--	--
														1AF
09/05/74 0700	5050	2.39	8.1	66.2F	8.0	293	--	--	--	--	--	--	--	--
		169	90	19.0C										1AF
F6 3009.01 EEL RIVER MIDDLE FORK AT DOS RIOS														
10/03/73 0930	5050	6.27	12.2	59.0F	7.9	337	--	--	--	--	--	--	--	--
	5050	25	124	15.0C										1AF
11/15/73 0800	5050	13.08	12.9	49.1F	8.0	106	15	3.5	3.0	1.2	0	58	7.7	
	5050	7450	116	9.5C	7.6	114	.75	.29	.13	.03	.00	.95	.16	.00
							63	24	11	3	0	86	14	96
													59	52
													0	0.2
12/12/73 1015	5050	11.10	13.7	43.7F	7.8	130	--	--	--	--	--	--	--	--
	5050	3440	114	6.5C										51AF
01/23/74 1115	5050	11.63	13.5	42.8F	7.6	143	--	--	3.4	--	0	76	--	
	5050	4370	111	6.0C	8.1	151	.15	.15	.10	.00	1.25	--	.9	
													.03	.00
02/06/74 1240	5050	9.16	14.1	40.1F	7.8	176	--	--	--	--	--	--	--	--
	5050	1220	112	4.5C										48AF
03/06/74 0720	5050	10.97		46.4F	7.9	156	--	--	--	--	--	--	--	--
	5040			8.0C										108AF
04/03/74 0840	5050	13.67	13.3	44.6F	7.8	124	--	--	3.4	--	0	67	--	
	5050	9030	113	7.0C	8.1		.15	.15	.11	.00	1.10	--	1.1	
													.03	.00
05/15/74 0835	5050	9.72	11.2	53.6F	7.9	146	--	--	--	--	--	--	--	--
	5050	1730	107	12.0C										25AF
06/12/74 0845	5050	8.57	8.7	68.0F	7.8	175	--	--	--	--	--	--	--	--
		793	98	20.0C										34F

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.M. Q	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HC ₀₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER								
							DEPTH	PERCENT REACTANCE	VALUE	B	F	TDS SUM	TH NCH	TURB SAR	REM			
F6 3009.01 EEL RIVER MIDDLE FORK AT DOS RIOS														CONTINUED				
07/10/74 0820	5050	7.29 549	9.0 99	65.3F 14.5C	7.9	247	--	--	--	--	--	--	--	--	2AF			
08/07/74 0820	5050	7.53 300		71.6F 22.0C	8.0	304	--	--	--	--	--	--	--	--	1AF			
09/05/74 0745	5050	11.56 232	8.0 99	66.0F 20.0C	7.9	318	--	--	--	--	--	--	--	--	1AF			
F6 3050.00 MILL CREEK NEAR COVELO																		
11/15/73 0915	5050 5050	11.1 103	50.9F 10.5C	8.0 7.9	108 114	12 .60 51	4.6 .38 32	3.9 .17 14	1.1 .03 3	0 .00 0	57 .93 45	6.1 .13 12	.9 .03 3	.00 -- --	71 57	49 3	70A 0.2	
12/12/73 1110	5050 5050	12.3 108	46.6F 8.0C	7.4	169	--	--	--	--	--	--	--	--	--	--	13AF		
01/23/74 1215	5050 5050	12.4 200E	43.7F 6.5C	7.3	173	--	--	--	--	--	--	--	--	--	--	31AF		
02/06/74 1330	5050 5050	12.7 100E	43.7F 6.5C	7.5	210	--	--	--	--	--	--	--	--	--	--	8AF		
03/06/74 0825	5050 5050	12.4 114	47.3F 8.5C	7.4	174	--	--	--	--	--	--	--	--	--	--	17AF		
04/03/74 0930	5050 5050	12.0 105	46.4F 8.0C	7.4	145	--	--	4.4 .19 13	--	0 .00 1.31	80 -- --	.9 .03	-- --	.00 --	65	110A 0.2		
05/15/74 0925	5050 5050	10.2 40E	59.0F 15.0C	8.0	306	--	--	--	--	--	--	--	--	--	--	1AF		
06/12/74 0940	5050	7.6 20E	73.4F 23.0C	7.6	344	--	--	--	--	--	--	--	--	--	--	1AF		
07/10/74 0905	5050 5050	7.1 6E	67.1F 19.5C	7.4	327	--	--	9.8 .43 13	--	0 .00 3.06	187 3.06	--	5.0 .14	-- --	.10 --	150	0A 0.3	
F6 3200.00 BLACK BUTTE RIVER NEAR COVELO																		
10/03/73 1045	5050 5050	11.50 21	67.4F 12.6	8.0 16.0C	8.1 7.9	300 302	--	--	6.6 .29 9	--	0 .00 2.03 98	124 -- --	1.8 .05 2	.3 .00	.00 --	144	0A 0.2	
11/15/73 1010	5050 5050	13.50 596	57.0F 11.7	8.4 10.0C	7.6	110 116	17 .85 75	1.8 .15 13	2.8 .12 11	.8 .02 2	0 .00 0	54 .89 62	7.6 .16 15	.9 .03 3	-- --	84 58	50 6	24A 0.2
12/12/73 1215	5050 5050	12.97 717	41.9F 11.4	7.5	127	--	--	--	--	--	--	--	--	--	--	21AF		
01/23/74 1305	5050 5050	15.53 3960	43.7F 11.1	8.0 6.5C	8.0 8.2	140 151	--	--	3.2 .14 9	--	0 .00 1.16	71 --	.9 .03	-- --	.20 --	68	420A 0.2	
02/06/74 1420	5050 5050	15.52 3060	41.0F 11.2	7.6	176	--	--	--	--	--	--	--	--	--	--	90AF		
03/06/74 0925	5050 5050	15.52 687	45.5F 11.5	7.8	165	--	--	--	--	--	--	--	--	--	--	148AF		
04/03/74 1100	5050 5050	15.52 786	42.8F 11.0	7.8	126	--	--	3.4 .15 11	--	0 .00 1.07	65 --	1.2 .03	-- --	.10 --	58	50A 0.2		
05/15/74 1010	5050 5050	12.35 211	51.8F 10.7	7.6	145	--	--	--	--	--	--	--	--	--	--	15AF		
06/12/74 1020	5050	11.62 77	67.1F 94	7.9	201	--	--	--	--	--	--	--	--	--	--	2AF		
07/10/74 0950	5050	11.35 45	66.4F 97	8.0 18.0C	8.0	250	--	--	--	--	--	--	--	--	--	1AF		
08/07/74 0945	5050	10.44 8.1	74.3F 23.5C	8.0	289	--	--	--	--	--	--	--	--	--	--	1AF		
09/05/74 0910	5050	10.41 7.2	69.8F 111	8.0	316	--	--	--	--	--	--	--	--	--	--	0AF		

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.M. Q DEPTH	DO SAT	TEMP PH EC	FIELD LABORATORY	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HC ₀₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER									
							PERCENT	REACTANCE	VALUE	H	F	TOS SUM	TH NCH	TURB SAR	HEM				
F6 4100.00 EEL RIVER SOUTH FORK NEAR MIRANDA																			
10/02/73 1320	5050 5050	3.86 74	13.9 146	63.5F 17.5C	8.1	257	--	--	--	--	--	--	--	--	1AF				
11/14/73 1550	5050 5050	12.53 14400	12.2 114	53.6F 12.0C	8.2	92	10 50 51	3.2 26 26	4.4 19 19	1.5 04 04	0 00 00	46 75 79	4.0 08 8	4.3 12 13	.00 --	64 50	38 1	2404 0.3	
12/11/73 1555	5050 5050	8.03 4100	12.2 109	50.0F 10.0C	8.1	117	--	--	--	--	--	--	--	--	--	--	102AF		
01/16/74 1100	5050 5050	34.52 122000	12.5 113	50.9F 14.5C	7.2	64	--	--	3.9 17 18	0	39	--	1.8 05	--	.50 --	--	38 32004 0.3		
02/06/74 0915	5050 5050	6.89 1600	13.4 109	43.7F 6.5C	7.3	129	--	--	--	--	--	--	--	--	--	--	61AF		
03/05/74 1220	5050 5050	8.72 4500	12.3 109	56.0F 14.0C	7.3	113	--	--	--	--	--	--	--	--	--	--	129AF		
04/02/74 1220	5050 5050	12.14 13000	11.7 108	52.7F 11.5C	7.6	88	--	--	4.6 20 21	0	48 00 .79	--	3.5 .10	--	.10 --	--	38 15004 0.3		
05/14/74 1420	5050 5050	5.60 850	11.4 118	62.6F 17.0C	8.2	186	--	--	--	--	--	--	--	--	--	--	1AF		
06/11/74 1420	5050	3.44 325	10.3 124	77.0F 25.0C	8.3	208	--	--	--	--	--	--	--	--	--	--	1AF		
07/09/74 1410	5050	5.20 270	10.0 114	71.6F 22.0C	8.3	234	--	--	--	--	--	--	--	--	--	--	1AF		
08/06/74 1345	5050	4.58 67		80.6F 27.0C	8.1	252	--	--	--	--	--	--	--	--	--	--	2AF		
09/04/74 1330	5050	4.53 138	12.5 128	75.2F 24.0C	8.2	251	--	--	--	--	--	--	--	--	--	--	1AF		
F6 5279.00 VAN DUZEN RIVER NEAR BRIDGEVILLE																			
10/02/73 1050	5050 5050	3.53 28	12.1 121	59.0F 15.0C	7.8	265	--	--	--	--	--	--	--	--	--	--	1AF		
11/14/73 1230	5050 5050	9.70 6200	12.1 108	50.0F 10.0C	8.1	92	13 65 59	3.0 .25 23	3.2 .14 13	2.3 .06 5	0 .00 00	50 .82 80	7.6 .16 16	.9 .03 3	.5 .01 1	.00 --	86 55	45 4	2604 0.2
12/11/73 1320	5050 5050	7.12 1980	13.0 113	48.2F 9.0C	7.4	109	--	--	--	--	--	--	--	--	--	--	--	170AF	
02/05/74 1505	5050 5050	5.46 900	13.5 111	43.7F 6.5C	7.2	120	--	--	--	--	--	--	--	--	--	--	--	49AF	
03/05/74 1150	5050 5050	6.66 2710	13.4 116	47.3F 8.5C	7.3	108	--	--	--	--	--	--	--	--	--	--	--	105AF	
04/02/74 1130	5050 5050	9.11 5700	12.8 108	45.5F 7.5C	7.6	95	--	--	3.0 13 13	0	52 .00 .85	--	1.1 .03	--	.00 --	--	43 550A 0.2		
05/14/74 1150	5050 5050	4.75 195	10.6 106	59.0F 15.0C	7.8	162	--	--	--	--	--	--	--	--	--	--	--	1AF	
06/11/74 1150	5050	4.31 74	8.9 103	72.5F 22.5C	8.1	200	--	--	--	--	--	--	--	--	--	--	--	1AF	
07/09/74 1120	5050	4.20 57	9.6 105	67.1F 19.5C	8.0	233	--	--	--	--	--	--	--	--	--	--	--	1AF	
08/06/74 1135	5050	3.83 19		71.6F 22.0C	8.2	258	--	--	--	--	--	--	--	--	--	--	--	1AF	
09/04/74 1100	5050	3.67 10	9.8 108	68.0F 20.0C	8.0	262	--	--	--	--	--	--	--	--	--	--	--	1AF	
F7 1100.00 MATTOLE RIVER NEAR PETROLIA																			
02/05/74 1310	5050 5050	4.49 1350	12.7 110	48.2F 9.0C	7.6	130	15 59	3.0 .25 20	5.8 .25 .02	.8 0 2	0 .00 0	58 .95 77	9.7 .20 16	2.9 .08 7	.2 .00 0	.20 --	82 66	51 3	1204 0.4

TABLE D-2 cont
MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN WATER	MILLIGRAMS PER LITER						MILLIGRAMS PER LITER							
							CA	MG	NA	K	CO ₃	SO ₄	CL	NO ₃	PERCENT REACTANCE VALUE	R	F	TDS SUM	TH NCH	TURB SAR
02/05/74 1200	5050 5050	12.8 300E	108	46.4F 8.0C	7.4	160 159	20 1.00	3.2 .26	6.7 .29	1.5 .04	0 .00	60 .98	18 .37	5.5 .16	.8 .01	.10 .24	-- 11	98 85	62 14	180A 0.4

F7 5100.00 HEA RIVER AT CAPETOWN

TABLE D-3

MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

- TIME - Pacific Standard Time on a 24-hour clock
- DISCH - Instantaneous discharge in cubic feet per second
- EC - Electrical conductance in micromhos at 25° Celsius
- TEMP - Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)
- PH - Measure of acidity (<7) or alkalinity (>7) of water
- CHROM (ALL) - All chromium
- CHROM (HEX) - Hexavalent chromium
- D - Dissolved
- T - Total

TABLE D-3
MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	CONSTITUENTS IN MILLIGRAMS PER LITER								LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM			
					ARSENIC	BARIUM	CADMIUM	CHROM (ALL)	CHROM (HEX)	COPPER	IRON	LEAD MANGANESE							
					SMITH RIVER NEAR CRESCENT CITY														
04/02/74 0700	5050 5a50				8.0C 7.4	--	--	0.00	T	--	0.01 5.1	T	0.01 0.04	T	--	--	0.01	T	
					SHASTA RIVER NEAR YREKA														
05/07/74 1120	5050 5050				18.5C 8.2	--	--	0.00	T	--	0.01 0.26	T	0.00 0.01	T	--	--	0.02	T	
					SCOTT RIVER NEAR FORT JONES														
05/07/74 1430	5050 5050				12.5C 7.5	--	--	0.00	T	--	0.01 3.5	T	0.00 0.08	T	--	--	0.01	T	
					KLAMATH RIVER NEAR KLAMATH														
10/02/73 0810	5050 5000				15.5C 7.8	--	--	--	--	--	0.00	D	--	--	--	--	--	--	
11/13/73 1635	5050 5000				9.0C 7.3	--	--	--	--	--	0.060	D	--	--	--	--	--	--	
12/11/73 0935	5050 5000				6.5C 7.4	--	--	--	--	--	0.050	D	--	--	--	--	--	--	
01/15/74 0935	5050 5000				8.0C 8.0	--	--	--	--	--	0.050	D	--	--	--	--	--	--	
02/05/74 0855	5050 5000				6.0C 7.5	--	--	--	--	--	0.020	D	--	--	--	--	--	--	
03/05/74 0835	5050 5000				8.0C 7.7	--	--	--	--	--	0.040	D	--	--	--	--	--	--	
04/02/74 0845	5050 5050				8.0C 7.9	--	--	0.00	T	--	0.06 41.	T	0.00 0.92	T	--	--	0.08	T	
05/14/74 0915	5050 5000				11.5C 8.3	--	--	--	--	--	0.05	D	--	--	--	--	--	--	
06/11/74 0910	5050 5000				17.0C 7.4	--	--	--	--	--	0.040	D	--	--	--	--	--	--	
07/09/74 0750	5050 5000				17.0C 7.5	--	--	--	--	--	0.020	D	--	--	--	--	--	--	
08/06/74 0830	5050 5000				215.3 76.0	--	--	--	--	--	0.0030	D	--	--	--	--	--	--	
09/04/74 0810	5050 5000				20.0C 7.9	--	--	--	--	--	0.0020	D	--	--	--	--	--	--	
					F3 1220.01 KLAMATH RIVER AT ORLEANS														
04/01/74 1145	5050 5050				8.0C 7.7	--	--	0.01	T	--	0.08 30.	T	0.00 0.64	T	--	--	0.05	T	
					F3 1430.00 KLAMATH RIVER NEAR SEIAD VALLEY														
05/07/74 1320	5050 5050				14.0C 8.4	--	--	0.00	T	--	0.01 2.2	T	0.01 0.06	T	--	--	0.01	T	
					F3 1599.01 KLAMATH RIVER BELOW IRON GATE DAM														
05/07/74 1030	5050 5050				14.0C 7.6	--	--	0.00	T	--	0.00 0.41	T	0.00 0.02	T	--	--	0.21	T	
					F4 1080.00 TRINITY RIVER AT HOOPA														
04/01/74 1040	5050 5050				7.5C 8.3	--	--	0.01	T	--	0.10 48.	T	0.01 1.1	T	--	--	0.28	T	
					F4 1376.00 TRINITY RIVER NEAR HURNT RANCH														
05/13/74 0905	5050 5050				11.0C 7.4	--	--	0.00	T	--	0.01 0.59	T	0.00 0.02	T	--	--	0.02	T	
					F4 1640.00 TRINITY RIVER AT LEWISTON														
05/16/74 1235	5050 5050				8.5C 7.3	--	--	0.00	T	--	0.00 0.46	T	0.00 0.01	T	--	--	0.00	T	
					F5 1100.00 MAD RIVER NEAR ARCATA														
05/13/74 1350	5050 5a50				16.0C 8.2	--	--	0.00	T	--	0.00 0.10	T	0.00 0.01	T	--	--	0.00	T	
					F5 5100.00 REDWOOD CREEK AT ORICK														
04/01/74 1435	5050 5050				9.5C 7.4	--	--	0.01	T	--	0.37 228.	T	0.12 5.0	T	--	--	0.67	T	
					F6 1100.00 EEL RIVER AT SCOTIA														
10/02/73 1150	5050 5000				16.0C 7.9	--	--	--	--	--	0.010	D	--	--	--	--	--	--	
11/14/73 1400	5050 5000				12.0C 7.9	--	--	--	--	--	0.060	D	--	--	--	--	--	--	
12/11/73 1415	5050 5000				9.0C 7.4	--	--	--	--	--	0.040	D	--	--	--	--	--	--	
01/16/74 0905	5050 5000				10.5C 7.6	--	--	--	--	--	0.080	D	--	--	--	--	--	--	
02/05/74 1600	5050 5000				8.5C 7.6	--	--	--	--	--	0.020	D	--	--	--	--	--	--	
03/05/74 1335	5050 5000				8.5C 7.6	--	--	--	--	--	0.020	D	--	--	--	--	--	--	



TABLE D-3 cont
MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	CONSTITUENTS IN MILLIGRAMS PER LITER							LEAD	MERCURY	SILVER ZINC	REM
						BARIUM	CADMIUM	CHROM (ALL)	CHROM (HEX)	COPPER	IRON	MANGANESE				
						EEL RIVER AT SCOTIA										CONTINUED
04/02/74 1245	5050 5050			10.0C 8.0		--	0.01	T	--	0.12	T	0.02	T	--	--	--
05/14/74 1245	5050 5000			17.0C 8.3	180	--	--	--	--	--	D	--	--	--	--	--
06/11/74 1255	5050 5000			23.0C 7.9	227	--	--	--	--	0.020	D	--	--	--	--	--
07/09/74 1230	5050 5000			20.0C 8.1	279	--	--	--	--	0.010	D	--	--	--	--	--
09/04/74 1210	5050 5000			18.0C 8.0	317	--	--	--	--	--	D	--	--	--	--	--
				EEL RIVER AT SOUTH FORK												
04/02/74 1340	5050 5050			10.0C 8.2		--	0.01	T	--	0.07	T	0.01	T	--	--	--
				EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS												
04/02/74 1340	5050 5050			10.0C 8.2		--	0.00	T	--	0.03	T	0.00	T	--	--	--
				OUTLET CREEK NEAR LONGVALE												
04/03/74 0740	5050 5050			9.0C 7.3		--	0.00	T	--	0.01	T	0.00	T	--	--	--
				EEL RIVER MIDDLE FORK AT DOS RIOS												
04/03/74 0840	5050 5050			7.0C 7.8		--	0.01	T	--	0.05	T	0.01	T	--	--	--
				BLACK BUTTE RIVER NEAR COVELO												
04/03/74 1100	5050 5050			6.0C 7.8		--	0.01	T	--	0.07	T	0.06	T	--	--	--
				EEL RIVER SOUTH FORK NEAR MIRANDA												
04/02/74 1420	5050 5050			11.5C 7.6		--	0.01	T	--	0.06	T	0.02	T	--	--	--
				VAN DUZEN RIVER NEAR BRIDGEVILLE												
04/02/74 1130	5050 5050			7.5C 7.6		--	0.01	T	--	0.06	T	0.39	T	--	--	--

TABLE D-4

SUPPLEMENTAL MINOR ELEMENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock

DISCH - Instantaneous discharge in cubic feet per second

EC - Electrical conductance in micromhos at 25° Celsius

TEMP - Water temperature at time of sampling in degrees Fahrenheit (F) and Celsius (C)

PH - Measure of acidity (<7) or alkalinity (>7) of water

D - Dissolved

T - Total

TABLE D-4
SUPPLEMENTAL MINOR ELEMENT ANALYSIS OF SURFACE WATER

DATE TIME	SAMP L48	DEPTH	DISCH EC	TEMP PH	ALUMINUM	CONSTITUENTS IN MILLIGRAMS PER LITER							NICKEL STRONTIUM	TITANIUM VANADIUM	REM
						ANTIMONY	BERYLLIUM	BISMUTH	COBALT	GALLIUM	GERMANIUM	MOLYBDENUM			
F3 1100.00 Klamath River Near Klamath															
10/02/73 0810	5050 5000		219	15.5C 7.8	--	--	--	--	--	0.00	D	--	0.0160 D	--	
11/13/73 1635	5050 5000		102	9.0C 7.3	--	--	--	--	--	0.00	D	--	0.080 D	--	
12/11/73 0935	5050 5000			6.5C 7.4	--	--	--	--	--	0.000	D	--	0.090 D	--	
01/15/74 0935	5050 5000			8.0C 8.0	--	--	--	--	--	0.000	O	--	0.060 D	--	
02/05/74 0855	5050 5000			6.0C 7.5	--	--	--	--	--	0.000	D	--	0.060 D	--	
03/05/74 0835	5050 5000			8.0C 7.7	--	--	--	--	--	0.00	D	--	0.090 D	--	
04/02/74 0845	5050 5000		152	8.0C 7.9	--	--	--	--	--	0.20	D	--	0.60 D	--	
05/14/74 0915	5050 5000		122	11.5C 8.3	--	--	--	--	--	0.00	D	--	0.080 D	--	
06/11/74 0910	5050 5000		107	17.0C 7.4	--	--	--	--	--	0.00	D	--	0.08 D	--	
07/09/74 0750	5050 5000		149	17.0C 7.5	--	--	--	--	--	0.000	D	--	0.110 D	--	
08/06/74 0830	5050 5000		175	215.3 76.0	--	--	--	--	--	0.0000	D	--	0.0010 D	--	
09/04/74 0810	5050 5000		206	20.0C 7.9	--	--	--	--	--	0.000	D	--	0.0013 D	--	
F6 1100.00 Eel River at Scotia															
10/02/73 1150	5050 5000		304	16.0C 7.9	--	--	--	--	--	0.00	D	--	0.0460 D	--	
11/14/73 1400	5050 5000		109	12.0C 7.9	--	--	--	--	--	0.00	D	--	0.0180 D	--	
12/11/73 1415	5050 5000			9.0C 7.4	--	--	--	--	--	0.000	D	--	0.190 D	--	
01/16/74 0905	5050 5000			10.5C 7.6	--	--	--	--	--	0.000	O	--	0.110 D	--	
02/05/74 1600	5050 5000			8.5C 7.6	--	--	--	--	--	0.000	D	--	0.240 D	--	
03/05/74 1335	5050 5000			8.5C 7.6	--	--	--	--	--	0.00	D	--	0.0210 D	--	
04/02/74 1245	5050 5000		143	10.0C 8.0	--	--	--	--	--	0.02	D	--	0.14 D	--	
05/14/74 1245	5050 5000		188	17.0C 8.3	--	--	--	--	--	0.00	D	--	0.30 D	--	
06/11/74 1255	5050 5000		227	23.0C 7.9	--	--	--	--	--	0.00	D	--	0.32 D	--	
07/09/74 1230	5050 5000		279	20.0C 8.1	--	--	--	--	--	0.000	D	--	0.420 D	--	
09/04/74 1210	5050 5000		317	18.0C 8.0	--	--	--	--	--	0.0000	D	--	0.0044 D	--	

TABLE D-5 NUTRIENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey
 5050 - Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock.
G.H. - Instantaneous gage height in feet above an established datum.
Q - Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
TEMP - Water temperature in degrees Fahrenheit (F) or Celsius (C).
TURB - Jackson Turbidity Units measured with a Hellege Turbidimeter (E) or a Hach Nephelometer (A).
PH - Measure of acidity or alkalinity of water.
EC - Electrical conductance in micromhos at 25° C.
HCO₃ - Bicarbonate
CO₃ - Carbonate

Nitrogen Series as N

NO₂ - Unfiltered nitrite
 NH₃ - Unfiltered ammonia
 NO₃ - Unfiltered nitrate
 ORG N - Organic nitrogen
 DIS ORG N - Dissolved organic nitrogen
 NH₃ + ORG N - Ammonia plus organic nitrogen

Phosphorus Series as P

DIS A.H.PO₄ - Dissolved acid hydrolyzable phosphate
 D O-PO₄ - Dissolved orthophosphate
 T O-PO₄ - Total orthophosphate
 D TOT P - Dissolved total phosphorus
 TOT P - Total phosphorus

TABLE D-5

DATE TIME	SAMP LAB	G.H. DISCH.	TEMP DEPTH	PH EC	FIELD LAB	FIELD TURB CACO3 F-CO2 CACO3 T	LAB P HC03 CACO3 T CO3 NH3	NUTRIENT ANALYSIS OF SURFACE WATER										NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER									
								NO2 NO3	F U ORG ORG N N	ORG N U ORG N U	F U NH3 NH3 N N	DIS A.H.PO4 A.H.PO4	F U M3PO4 M3PO4	F U TOT TOT P P REM													
F0 1300.00 SMITH RIVER NEAR CRESCENT CITY																											
04/02/74 0700	5050 5050	20.94 8.0C	8.0C 7.4			66	484	--	-- 0.02	--	-- 0.0	--	--	--	--	--	0.01 --	--	--	--	0.01 0.17						
F2 1050.00 SHASTA RIVER NEAR YREKA																											
05/07/74 1120	5050 5050	3.68 8.2	18.5C 8.2					--	-- 0.02	--	-- 0.3	--	--	--	--	--	0.11 --	--	--	--	0.11 0.12						
F2 5250.00 SCOTT RIVER NEAR FORT JONES																											
05/07/74 1430	5050 5050	9.51 8.5	12.5C 7.5					--	-- 0.11	--	-- 0.1	--	--	--	--	--	0.01 --	--	--	--	0.01 0.10						
F3 1100.00 KLAMATH RIVER NEAR KLAMATH																											
10/02/73 0810	5050 5000	15.5C 8.1	7.8	219			112	0	-- 0.05	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	
11/13/73 1635	5050 5000	9.0C 5000	7.3	102					-- 0.06	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	
12/11/73 0935	5050 5000	6.5C 5000	7.4	127	504		70	0	-- 0.21	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	
01/15/74 0935	5050 5000	8.0C 5000	8.0	2004			49	0	-- 0.13	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.70	
02/05/74 0855	5050 5000	6.0C 5000	7.5	144	704		78		-- 0.31	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	
03/05/74 0835	5050 5000	8.0C 5000	7.7	148	804		76		-- 0.20	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	
04/02/74 0845	5050 5050	12.53 8.5	8.0C 7.9					-- 0.05	--	-- 0.7	--	--	--	--	--	--	0.03 --	--	--	--	--	--	--	--	1.9		
04/02/74 0846	5050 5000	8.0C 5000	7.9	152	100A		60		-- 0.30	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.83	
05/14/74 0915	5050 5000	11.5C 5000	8.3	122	30A		67		-- 0.06	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	
06/11/74 0910	5050 5000	17.0C 5000	7.4	107	20A		61		-- 0.03	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05	
07/09/74 0750	5050 5000	17.0C 5000	7.5	149	1A		84		-- 0.01	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.03	
08/06/74 0830	5050 5000	215.3 7.6	7.0	175	2A			-- 0.06	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.03	
09/04/74 0810	5050 5000	20.0C 5000	7.9	206	2A			-- 0.07	--	-- --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	
F3 1220.01 KLAMATH RIVER AT ORLEANS																											
01/01/74 1145	5050 5050	19.72 8.1	8.0C 7.5	7.5	220A		63	0	-- 0.05	--	-- 0.5	--	--	--	--	--	0.03 --	--	--	--	--	--	--	--	--	0.67	
F3 1430.00 KLAMATH RIVER NEAR SELAD VALLEY																											
10/15/73 1120	5050 5050	14.5C 5050	8.0	274				-- 0.42	--	-- --	--	--	--	--	--	--	0.18 --	--	--	--	--	--	--	--	--	--	
11/15/73 1105	5050 5050	8.5C 5050	8.1	181	13A			-- 0.40	--	-- --	--	--	--	--	--	--	0.09 --	--	--	--	--	--	--	--	--	--	
01/14/74 1425	5050 5050	5.0C 5050	7.4	160	110A			-- 0.45	--	-- --	--	--	--	--	--	--	0.04 --	--	--	--	--	--	--	--	--	--	
05/07/74 1320	5050 5050	14.0C 5050	8.4					-- 0.12	--	-- 0.2	--	--	--	--	--	--	0.03 --	--	--	--	--	--	--	--	0.12		
F3 1599.01 KLAMATH RIVER BELOW IRON GATE DAM																											
05/07/74 1030	5050 5050	14.0C 5050	7.6					-- 0.17	--	-- 0.4	--	--	--	--	--	--	0.05 --	--	--	--	--	--	--	--	0.08		
F4 1080.00 TRINITY RIVER AT HOOPA																											
11/13/73 1305	5050 5050	25.09 5050	9.5C 8.1	7.4	117	130A		-- 0.08	--	-- --	--	--	--	--	--	--	0.00 --	--	--	--	--	--	--	--	--		
04/01/74 1040	5050 5050	31.84 5050	7.5C 8.1	8.3	111	360A	63	-- 0.02	--	-- 0.7	--	--	--	--	--	--	0.02 --	--	--	--	--	--	--	--	1.7		
08/05/74 1040	5050 5050	14.03 5050	22.0C 5050	7.4	175	1AF		-- 0.05	--	-- --	--	--	--	--	--	--	0.01 --	--	--	--	--	--	--	--	--		
F4 1376.00 TRINITY RIVER NEAR BURNT RANCH																											
05/13/74 0905	5050 5050	11.0C 5050	7.4		114			-- 0.00	--	-- 0.1	--	--	--	--	--	--	0.01 --	--	--	--	--	--	--	--	0.02		
F4 1640.00 TRINITY RIVER AT LEWISTON																											
03/04/74 0800	5050 5050	3.36 5050	7.9C 8.1	7.1	76	35AF		-- 0.07	--	-- --	--	--	--	--	--	--	0.01 --	--	--	--	--	--	--	--	--		
05/16/74 1235	5050 5050	5.40 5050	8.5C 1235	7.3	71	12A		-- 0.04	--	-- 0.1	--	--	--	--	--	--	0.00 --	--	--	--	--	--	--	--	0.01		
F5 1100.00 MAD RIVER NEAR ARCASTA																											
05/13/74 1350	5050 5050	4.49 5050	16.0C 1350	8.2	158	3A		-- 0.00	--	-- 0.0	--	--	--	--	--	--	0.00 --	--	--	--	--	--	--	--	0.02		



TABLE D-5 cont

DATE TIME	SAMP LAB	G.H. DISCM.	TEMP DEPTH	FIELD PH EC	NUTRIENT ANALYSIS OF SURFACE				WATER NO2 NO3	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER										
					FIELD TURB	CACO ₃	P F-CO ₂	HC0 ₃	CACO ₃	T CO ₃	NH ₃	F ORG N	F U ORG N	F U ORG N	DIS A ₂ H ₂ PO ₄	F U H ₂ PO ₄	F U TOT P	P REM		
F5 5100.00 REDWOOD CREEK AT ORICK																				
04/01/74 5050 1435 5050 16.93 9.5C 7.6 8.0 57 1600A 27 0 -- 0.07 -- -- -- -- 0.02 -- --																				
F6 1109.00 EEL RIVER AT SCOTIA																				
10/02/73 5050 1150 5000 16.0C 7.9 8.3 304 151 0 -- 0.03 -- -- -- -- -- -- -- --	0.04																			
11/14/73 5050 1400 5000 12.0C 7.9 109 -- 0.26 -- -- -- -- -- -- -- --	0.90																			
12/11/73 5050 1415 5000 9.0C 7.4 138 50A 69 0 -- 0.13 -- -- -- -- -- --	0.12																			
01/16/74 5050 0905 5000 10.5C 7.6 96 200A 53 0 -- 0.48 -- -- -- -- -- --	2.3																			
02/05/74 5050 1600 5000 8.5C 7.6 160 80A 82 -- 0.14 -- -- -- -- -- --	0.12																			
03/05/74 5050 1335 5000 8.5C 7.6 149 100A 76 -- 0.27 -- -- -- -- -- --	0.04																			
04/02/74 5050 1245 5050 27.82 10.0C 8.0 -- -- 0.03 -- 1.2 -- 0.03 -- --	0.68																			
04/02/74 5050 1246 5000 10.0C 8.0 143 600A 57 108 -- 0.36 -- -- -- -- -- --	1.2																			
05/14/74 5050 1245 5000 17.0C 8.3 188 10A 98 183 -- 0.06 -- -- -- -- -- --	0.19																			
06/11/74 5050 1255 5000 23.0C 7.9 227 1A 121 229 -- 0.03 -- -- -- -- -- --	0.00																			
07/09/74 5050 1230 5000 20.0C 8.1 279 -- -- 0.03 -- -- -- -- -- --	0.02																			
09/04/74 5050 1210 5000 18.0C 8.0 317 1A 314 -- -- 0.04 -- -- -- -- -- --	0.00																			
F6 1154.50 EEL RIVER AT SOUTH FORK																				
04/02/74 5050 1340 5050 10.0C 8.2 8.3 650A 59 108 0 -- 0.02 -- 1.1 -- 0.02 -- 0.94	--																			
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																				
11/15/73 5050 1200 5050 12.0C 7.9 113 110A -- -- 0.08 -- -- -- -- 0.01 -- --	--																			
04/02/74 5050 1340 5050 10.0C 8.2 8.0 270A 55 103 0 -- 0.01 -- 0.4 -- 0.02 -- 0.75	--																			
F6 1350.00 OUTLET CREEK NEAR LONGVALE																				
04/03/74 5050 0740 5050 9.0C 7.3 8.0 95A 39 75 0 -- 0.05 -- 0.2 -- 0.02 -- 0.80	--																			
F6 3009.01 EEL RIVER MIDDLE FORK AT DOS RIOS																				
11/15/73 5050 0800 5050 13.08 9.5C 8.0 106 -- -- 0.12 -- -- -- -- 0.01 -- --	--																			
01/23/74 5050 1115 5050 11.63 6.0C 7.6 143 240AF -- -- 0.07 -- -- -- -- 0.01 -- --	--																			
04/03/74 5050 0840 5050 13.67 7.0C 7.8 8.1 170A 67 124 0 -- 0.02 -- 0.7 -- 0.02 -- 0.65	--																			
F6 3050.00 MILL CREEK NEAR COVELO																				
11/15/73 5050 0915 5050 10.5C 8.1 108 70A -- -- 0.17 -- -- -- -- 0.01 -- --	--																			
04/03/74 5050 0930 5050 8.9C 7.4 145 86AF -- -- 0.23 -- -- -- -- 0.01 -- --	--																			
07/10/74 5050 0905 5050 6 E 19.5C 7.4 327 14F -- -- 0.02 -- -- -- -- 0.00 -- --	--																			
F6 3200.00 BLACK BUTTE RIVER NEAR COVELO																				
11/15/73 5050 1010 5050 13.50 10.0C 8.4 110 24A -- -- 0.07 -- -- -- -- 0.01 -- --	--																			
01/23/74 5050 1305 5050 15.53 6.5C 8.0 140 1100AF -- -- 0.05 -- -- -- -- 0.01 -- --	--																			
04/03/74 5050 1100 5050 15.52 6.0C 7.8 8.1 580A 65 126 0 -- 0.02 -- 0.9 -- 0.02 -- 1.4	--																			
F6 4100.00 EEL RIVER SOUTH FORK NEAR MIRANDA																				
11/14/73 5050 1550 5050 12.53 12.0C 8.2 92 240A -- -- 0.17 -- -- -- -- 0.01 -- --	--																			
04/02/74 5050 1420 5050 12.41 11.5C 7.6 8.2 1500A 48 88 0 -- 0.03 -- 0.6 -- 0.03 -- 0.65	--																			
F6 5279.00 VAN DUZEN RIVER NEAR BRIDGEVILLE																				
04/02/74 5050 1130 5050 9.11 7.5C 7.6 8.3 550A 52 95 0 -- 0.04 -- 0.9 -- 0.02 -- 0.66	--																			

TABLE D-6

PESTICIDES IN SURFACE WATER

All samples were collected and analyzed for pesticides by the Department of Water Resources (5050).

All samples were analyzed for two groups of pesticides, chlorinated organic compounds and organic phosphorus compounds. All pesticides detected are included in Table D-6. Other pesticides in these groups were absent or below detectable levels.

Pesticides

BHC - Benzene hexachloride

DDT - Dichloro diphenyl trichloroethane

ppDDD - Para para isomer of dichloro diphenyl dichloroethane

ppDDT - Para para isomer of dichloro diphenyl trichloroethane

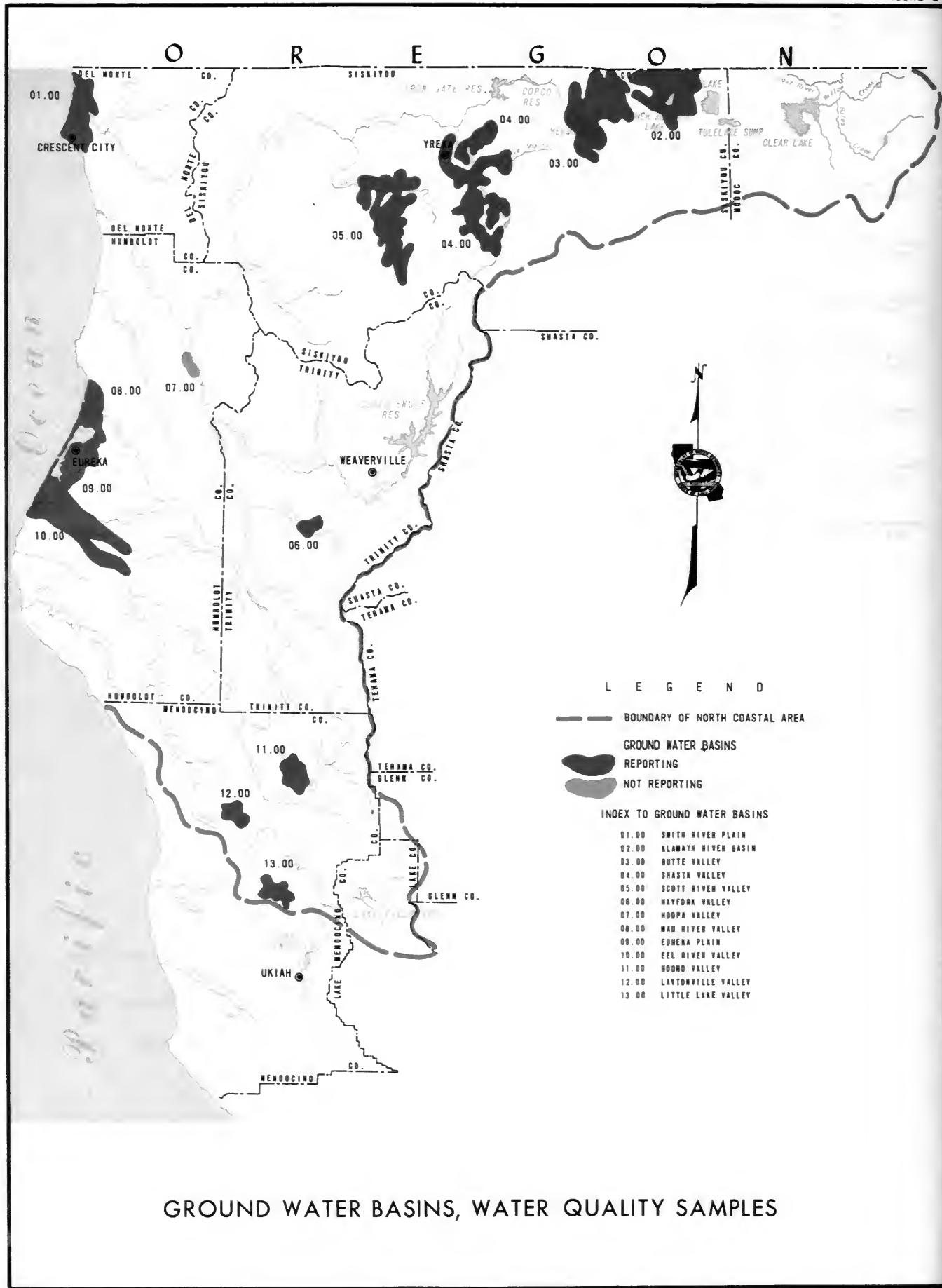
When two pesticides are reported together with a slash mark separating them (ppDDE/Dieldrin, Simazine/Atrazine, etc.), the reported concentration is an undifferentiated total of the two. Either of the two pesticides could make up the entire total.

TABLE D-6

 PESTICIDES IN SURFACE WATER
 COMPOUNDS REPORTED IN NANOGRAMS/LITER

DATE	SAMP	TEMP	DO	G.H.	DEP	LAB	DISCHARGE	CHLORINATED HYDROCARBON	ORGANIC PHOSPHORUS	OTHER
F0 1300.00 SMITH RIVER NEAR CRESCENT CITY										
04/02/74	5050	8.0C	13.7	20.94		NONE	DETECTED		NONE	DETECTED
0700	5050		7.4							
F2 1050.00 SHASTA RIVER NEAR YREKA										
05/07/74	5050	18.5C	9.8	3.68		NONE	DETECTED		NONE	DETECTED
1120	5050		8.2							
F2 5250.00 SCOTT RIVER NEAR FORT JONES										
05/07/74	5050	12.5C	10.5	9.51		NONE	DETECTED		NONE	DETECTED
1430	5050		7.5							
F3 1100.00 KLAMATH RIVER NEAR KLAMATH										
04/02/74	5050	8.0C	13.1	25.30		NONE	DETECTED		NONE	DETECTED
0845	5050		7.9							
F4 1080.00 TRINITY RIVER AT HOOPA										
04/01/74	5050	7.5C	12.9	31.84		NONE	DETECTED		NONE	DETECTED
1040	5050		8.3							
F5 5100.00 REDWOOD CREEK AT ORICK										
04/01/74	5050	9.5C	12.3	16.93		NONE	DETECTED		NONE	DETECTED
1435	5050		7.4							
F6 1100.00 EEL RIVER AT SCOTIA										
04/02/74	5050	10.0C	12.3	27.82		NONE	DETECTED		NONE	DETECTED
1245	5050		8.0							
F6 1154.50 EEL RIVER AT SOUTH FORK										
04/02/74	5050	10.0C	12.6			NONE	DETECTED		NONE	DETECTED
1340	5050		8.2							
F6 5279.00 VAN DUZEN RIVER NEAR BRIDGEVILLE										
04/02/74	5050	7.5C	12.8	9.11		NONE	DETECTED		NONE	DETECTED
1130	5050		7.6							

FIGURE E-1



APPENDIX E

GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1973, through September 30, 1974. The data were collected from a number of major ground water sources in the North Coastal area in cooperation with local agencies. During the 1973 water year, 96 wells were sampled in 10 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are made. The results are compared with measurements made in previous years. If a substantial change is noted, the samples are submitted to the laboratory for further analyses.

Laboratory analyses of ground waters are performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 13th Edition, 1971.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

TABLE E-1 MINERAL ANALYSES OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050 - California Department of Water Resources

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock.
<u>TEMP</u>	- Water temperature in degrees Fahrenheit or degrees Celsius. The computer prints out both.
<u>PH LAB & FIELD</u>	- Measure of acidity or alkalinity of water.
<u>EC LAB</u>	- The electrical conductance in micromhos at 25° Celsius.
<u>EC FIELD</u>	- The electrical conductance in micromhos at time of field sampling.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° Celsius.
<u>SUM</u>	- Total dissolved solids determined by addition of analyzed constituents.
<u>TH</u>	- Total hardness.
<u>NCH</u>	- Noncarbonate hardness.
<u>SAR</u>	- Sodium adsorption ratio.
<u>PERCENT REACTANCE</u>	
<u>VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO ₃	- Carbonate	NO ₃	- Nitrate
F	- Fluoride	SIO ₂	- Silica
HC ₀₃	- Bicarbonate	SO ₄	- Sulfate

TABLE E-1
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLE LAB	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃						MILLIEQUIVALENTS PER LITER PERCENT				MILLIGRAMS PER LITER REACTANCE VALUE				TDS SUM	TH NCH	SAR	REM							
				59.0F 15.0C	6.7	170	--	--	--	--	--	--	--	--	--	--	--											
NORTH COASTAL REGION SMITH RIVER PLAIN																												
1-01																												
09/04/74 1310	5050	16N/01W-02001	H	59.0F 15.0C	6.7	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
09/04/74 1630	5050	16N/02W-13E01	H	71.0F 21.6C	6.6	540	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--						
09/04/74 1440	5050 5050	17N/01W-03E01	H	66.0F 15.5C	6.9	305	--	--	--	--	--	--	--	--	5.0 .14	5.2 .08	--	--	137									
09/04/74 1420	5050 5050	17N/01W-04J01	H	64.0F 17.8C	6.9	320	7.5 .37	34 2.80	4.4 .19	.6 .02	0 1	184 90	4.3 .09	5.3 .15	6.5 .10	.00	--	172 153	158 8	0.2								
09/04/74 1400	5050	17N/01W-14C02	H	60.0F 15.5C	6.5	175	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							
09/04/74 1530	5050 5050	18N/01W-05K01	H	63.0F 17.2C	5.9	185	--	--	--	--	--	--	--	21 .59	21.0 .34	--	--	45										
09/04/74 1510	5050	18N/01W-26H01	H	62.0F 16.7C	6.3	105	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							
09/04/74 1450	5050	18N/01W-34M02	H	58.0F 14.4C	6.8	318	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							
1-02																												
KLAMATH RIVER BASIN																												
06/18/74 1235	5050 5050	46N/02E-15F01	M	57.0F 13.9C	7.1	850	83 4.14	26 2.14	56 2.44	5.5 .14	0 0.00	129 2.11	284 5.91	22 .62	13.0 .21	.40	--	630 553	314 209	1.4	E							
1-03																												
BUTTE VALLEY																												
06/18/74 1205	5050 5050	45N/01E-09C02	M	57.0F 13.9C	7.7	200	--	--	--	--	--	--	--	3.4 .10	4.2 .07	--	--	70										
06/19/74 1015	5050	47N/01E-07C02	M	62.0F 16.7C	8.1	675	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							
06/19/74 1005	5050 5050	47N/01E-07C03	M	77.0F 25.0C	8.3	445	6.4 .32	4.9 7	80 3.48	17 75	0 43	212 77	11 2.3	26 1.73	5.7 .09	.20	--	300 255	36 0	5.8								
06/19/74 0945	5050	47N/01E-08D01	M	57.0F 13.9C	7.7	850	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							
06/19/74 1110	5050 5050	47N/01E-32A01	M	70.0F 21.1C	8.2	218	--	--	--	--	--	--	--	6.4 .18	--	.10	--	42										
06/18/74 1500	5050 5050	48N/01E-30F01	M	56.0F 13.3C	7.8	395	--	--	--	--	--	--	--	6.6 .19	--	--	--	148										
06/18/74 1010	5050 5050	45N/01W-33D01	M	56.0F 13.3C	6.9	118	9.2 .46	5.8 4.1	4.1 1.8	1.6 0.04	0 0.00	72 1.18	1.0 .02	0.0 .00	1.3 .02	.00	--	96 58	47 0	0.3	E							
06/18/74 0950	5050 5050	45N/02W-01P01	M	51.0F 10.5C	6.5	158	13 .65	7.7 .24	5.6 .04	1.7 0.00	0 1.20	73 81	8.7 .18	0.0 .00	6.4 .10	.00	--	120 79	64 4	0.3	E							
06/18/74 0930	5050	45N/02W-01002	M	48.0F 8.9C	6.3	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							
06/19/74 1145	5050	46N/01W-02F01	M	54.0F 12.2C	8.2	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--							

TABLE E-1 cont
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN										MILLIGRAMS PER LITER				MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO ₃	HC ₀₃	SO ₄	CL	NO ₃	R	S102	F	TDS SUM	TH NCH	SAR	REM		
1-03 NORTH COASTAL REGION BUTTE VALLEY																					
46N/01W-17801 M				54.0F 12.2C	8.3	350	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/19/74 0835	5050																				
46N/01W-17G02 M				59.0F 15.0C	8.2	400	35	25	16	5.0	8.0	221	17	8.1	10.0	.00	--	234	192		
06/19/74 0815	5050																	233	0	0.5	
46N/01W-17L01 M				54.0F 12.2C	7.6	440	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/19/74 0735	5050																				
46N/61W-29F01 M				53.0F 11.7C	7.0	325	23	22	14	4.0	0	163	40	2.9	14.0	.00	--	223	146		
06/19/74 1310	5050																	200	15	0.5	
46N/01W-30Q01 M				54.0F 12.2C	7.0	312	21	22	11	4.4	4.0	145	39	2.0	14.0	.00	--	231	142		
06/19/74 1320	5050																	189	18	0.4	
46N/02W-13P01 M				54.0F 12.2C	7.1	450	--	--	--	--	--	--	--	9.7	12.0	--	--	--	143		
06/19/74 1249	5050																				
46N/02W-25R01 M				53.0F 11.7C	7.1	355	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/19/74 1345	5050																				
46N/02W-25R02 M				53.0F 11.7C	7.1	300	--	--	--	--	--	--	--	1.4	--	--	--	--	132		
06/19/74 1340	5050																				
46N/02W-26P01 M				53.0F 11.7C	7.7	185	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/19/74 1405	5050																				
46N/02W-26Q02 M				54.0F 12.2C	7.0	300	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/19/74 1400	5050																				
46N/02W-34B01 M				52.0F 11.1C	8.1	145	13	7.4	6.9	2.0	0	94	1.5	1.0	.6	.00	--	105	63		
06/19/74 1430	5050																	79	0	0.4	
46N/02W-36K01 M				53.0F 11.7C	6.9	350	23	24	10	3.8	0	134	40	2.7	26.0	.00	--	252	156		
06/19/74 1455	5050																	195	46	0.3	
47N/02W-21H03 M				55.0F 12.8C	7.2	118	--	--	--	--	--	--	--	--	--	--	--	--	--		
06/18/74 1715	5050																				
48N/01W-28F01 M				83.0F 28.3C	8.4	205	--	--	--	--	--	--	--	5.4	--	.20	--	--	9		
06/18/74 1600	5050																				
48N/01W-28J01 M				63.0F 17.2C	7.7	420	--	--	--	--	--	--	--	5.6	--	.10	--	--	153		
06/18/74 1540	5050																				
48N/01W-28J03 M				59.0F 15.0C	7.6	580	--	--	--	--	0	282	--	5.6	16.0	--	--	--	217		
06/18/74 1520	5050																				
48N/01W-31M01 M				57.0F 13.9C	6.9	495	34	26	14	3.0	0	103	14	29	94.0	.00	--	337	190		
06/18/74 1620	5050																	265	108	0.4	
48N/01W-36A01 M				81.0F 27.2C	8.4	340	6.2	2.6	60	13	0	190	1.2	8.2	5.6	.20	--	222	26		
06/18/74 1420	5050																	190	0	5.1	
1-n4 SHASTA VALLEY																					
42N/05W-20F01 M																			293		
07/01/74 0835	5050			67.0F 19.4C	6.8	700	23	57	49	1.5	0	413	12	31	2.2	2.00	--	400	0	1.2	
																		381			
42N/05W-20J01 M																					
07/01/74 0815	5050			60.0F 15.5C	6.8	335	--	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE E-1 cont'
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN MILLIEQUIVALENTS PER LITER								MILLIGRAMS PER LITER								
				CA	MG	NA	K	CO ₃	HC ₀₃	S ₀₄	CL	NO ₃	R	F	TDS	TH	REM			
1 1-04																				
NORTH COASTAL REGION SHASTA VALLEY																				
07/01/74 0930	5050	42N/06W-10J01	M 65.0F 14.3C	7.4	500	--	--	--	--	--	--	--	--	--	--	--	--			
07/01/74 1445	5050 5050	43N/04W-07M01	M 70.0F 21.1C	6.8	2500	64	195	216	6.0	0	1260	3.6	275	1.5	5.80	--	1350	963		
07/01/74 1225	5050 5050	43N/05W-02C01	M 53.0F 11.7C	6.3	224	13	12	17	1.9	0	122	4.4	9.4	.9	.10	--	154	81		
07/01/74 1015	5050 5050	43N/06W-15L01	M 56.0F 13.3C	7.3	615	--	--	--	--	--	--	--	10	--	--	--	302			
07/01/74 0955	5050	43N/06W-21R01	M 66.0F 15.5C	7.3	480	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1100	5050	44N/05W-32C03	M 65.0F 18.3C	7.3	1020	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1530	5050 5050	44N/06W-15C01	M 74.0F 23.3C	7.6	590	--	--	--	--	--	--	--	27	17.0	--	--	280			
07/01/74 1040	5050	44N/06W-22K01	M 65.0F 18.3C	7.0	440	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1635	5050	45N/05W-06E01	M 62.0F 16.7C	8.4	1000	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1555	5050	45N/06W-19E01	M 67.0F 19.4C	7.7	360	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1610	5050	45N/06W-22R01	M 64.0F 17.8C	8.3	500	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1550	5050 5050	45N/06W-27D02	M 60.0F 15.5C	8.3	580	--	--	--	--	--	--	--	20	54.0	--	--	225			
07/01/74 1710	5050	45N/06W-30E01	M 86.0F 30.0C	7.4	445	--	--	--	--	--	--	--	--	--	--	--				
1-05																				
SCOTT RIVER VALLEY																				
07/02/74 1225	5050 5050	42N/09W-02B01	M 56.0F 13.3C	7.2	560	--	--	--	--	--	--	--	9.8	--	--	--	293			
07/02/74 0715	5050	42N/09W-27K01	M 63.0F 17.2C	6.5	63	--	--	--	--	--	--	--	--	--	--	--				
07/02/74 0755	5050	42N/09W-29402	M 57.0F 13.9C	6.9	155	--	--	--	--	--	--	--	--	--	--	--				
07/02/74 1045	5050 5050	43N/09W-02G01	M 62.0F 16.7C	7.3	410	46	26	4.4	1.2	0	250	17	2.0	3.7	.00	--	196	220		
07/02/74 0945	5050	43N/09W-08F01	M 58.0F 14.4C	6.3	115	--	--	--	--	--	--	--	--	--	--	--				
07/01/74 1005	5050 5050	43N/09W-08H01	M 59.0F 15.0C	6.8	125	--	--	--	--	--	--	--	1.0	--	--	--	53			
07/02/74 1205	5050	43N/09W-24F02	M 56.0F 13.3C	7.1	440	--	--	--	--	--	--	--	--	--	--	--				

TABLE E-1 cont
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER				MILLIGRAMS PER LITER						
				CA	MG	NA	K	CO ₃	HCO ₃	SO ₄	CL	NO ₃	H	F	TDS	TH	SAR			
1-05																				
NORTH COASTAL REGION SCOTT RIVER VALLEY																				
07/02/74 0800	5050	43N/09W-29G02	H 25.0C	77.0F 7.7	85	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/74 0840	5050	43N/10W-11E01	M 14.4C	58.0F 6.8	63	--	--	--	--	--	--	--	--	--	--	--	--			
07/02/74 1145	5050	44N/08W-33E01	M 13.9C	57.0F 7.5	600	52	47	6.8	.7	0	321	29	6.8	35.0	.20	--	391			
07/02/74 1055	5050	44N/09W-34R01	M 22.8C	73.0F 6.8	295	--	--	--	--	--	--	--	2.7	12.0	--	--	325			
1-06																				
HAYFORK VALLEY																				
06/13/74 1245	5050	31N/12W-12L01	M 18.9C	66.0F 6.1	175	--	--	--	--	--	--	--	--	--	--	--	--			
06/13/74 1246	5105			66.0F 18.9C	175	--	--	--	--	--	--	--	--	--	--	--	--			
06/13/74 1225	5050	31N/12W-15K01	M 13.9C	57.0F 6.8	325	--	--	--	--	--	--	--	--	--	--	--	--			
06/13/74 1225	5050			57.0F 8.4	325	30	16	12	.3	4.0	168	15	11	.8	.00	--	174			
06/13/74 0940	5050	05N/01E-04H04	M 16.1C	61.0F 7.9	470	--	--	--	--	--	--	--	--	--	--	--	--			
09/05/74 1110	5050	06N/01E-07M01	H 15.5C	60.0F 8.5	520	--	--	18	--	6.0	274	--	28	--	--	--	242			
09/05/74 0855	5050	06N/01E-08H01	H 14.4C	58.0F 5.9	180	--	--	--	--	--	--	--	--	--	--	--	--			
09/05/74 1045	5050	06N/01E-19Q01	H 14.4C	58.0F 7.7	365	--	--	--	--	--	--	--	11	--	--	--	176			
09/05/74 1025	5050	06N/01E-30N01	H 14.4C	58.0F 7.2	365	--	--	--	--	--	--	--	--	--	--	--	--			
09/05/74 1010	5050	06N/01E-32F01	H 17.8C	64.0F 7.6	700	--	--	--	--	--	--	--	--	--	--	--	--			
09/05/74 0835	5050	06N/01W-01H01	H 13.3C	56.0F 6.1	205	--	--	--	--	--	--	--	--	--	--	--	--			
1-09																				
EUREKA PLAIN																				
09/05/74 1510	5050	05N/01E-18Q01	H 16.7C	62.0F 7.3	815	--	--	--	--	--	--	98	--	1.40	--	--	108			
09/05/74 1455	5050	05N/01E-20Q01	H 13.3C	56.0F 6.3	295	--	--	--	--	--	--	2.76	--	--	--	--	--			
09/05/74 1315	5050	04N/01W-08P01	H 13.3C	56.0F 7.7	170	--	--	--	--	--	--	--	--	--	--	--	--			
09/05/74 1330	5050	04N/01W-17801	H 13.3C	56.0F 6.9	190	--	--	--	--	--	--	--	--	--	--	--	--			

TABLE E-1 cont
MINERAL ANALYSES OF GROUND WATER

DATE TIME	SAMPLER LAB	TEMP FIELD PH EC	MINERAL CONSTITUENTS IN CA MG NA K CO ₃ HCO ₃ SO ₄ CL NO ₃	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER																	
				MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				B	F	TDS SUM	TH NCH	SAR	REM								
1																									
1-09 NORTH COASTAL REGION EUREKA PLAIN																									
09/06/74 05N/01W-29001 H 1210 5050 60.0F 6.5 290 -- -- -- -- -- -- -- -- -- -- -- -- --																									
15.5C																									
1-10 EEL RIVER VALLEY																									
09/06/74 02N/01W-04001 H 1000 5050 58.0F 6.7 570 -- -- -- -- -- -- -- -- -- -- -- -- --																									
14.4C																									
09/06/74 03N/01W-05K01 H 1100 5050 64.0F 6.3 160 -- -- -- -- -- -- -- -- -- -- -- -- --																									
17.8C																									
09/06/74 03N/01W-18A01 H 1045 5050 60.0F 7.3 475 -- -- -- -- -- -- -- -- -- -- -- -- --																									
15.5C 484																									
09/06/74 03N/01W-30N01 H 0750 5050 56.0F 6.5 580 -- -- -- -- -- -- -- -- -- -- -- -- --																									
13.3C																									
09/06/74 03N/02W-13J01 H 1030 5050 56.0F 6.5 4800 -- -- -- -- -- -- -- -- -- -- -- -- --																									
13.3C 4840																									
09/06/74 03N/02W-35H02 H 0825 5050 56.0F 6.7 650 24 28 76 13 0 312 30 46 5.8 .10 -- -- 387 176 2.5																									
13.3C 698																									
1-11 ROUND VALLEY																									
08/20/74 22N/12W-06L02 M 1025 5050 60.0F 7.2 400 41 21 16 .7 0 254 .5 2.4 2.8 .10 -- 234 187 0.5																									
15.5C 401																									
08/20/74 22N/12W-19F01 M 1110 5050 60.0F 6.9 380 29 41 14 .6 0 280 28 4.3 2.2 .00 -- 272 240 0.4 X																									
15.5C 486																									
08/20/74 22N/13W-01J03 M 1020 5050 60.0F 7.3 225 -- -- -- -- -- -- -- -- -- -- -- -- --																									
15.5C																									
08/20/74 22N/13W-13A01 M 1045 5050 76.0F 6.3 165 12 12 5.0 .2 0 105 1.6 1.9 1.5 .00 -- 116 81 0.2 T																									
24.4C 173																									
08/20/74 23N/12W-33L03 M 0910 5050 67.0F 7.2 585 66 29 29 0 408 .5 1.4 3.6 .10 -- 355 286 0.7																									
19.4C 615																									
08/20/74 23N/13W-25P01 M 0935 5050 66.0F 7.4 255 -- -- -- -- -- -- -- -- -- -- -- -- --																									
15.5C																									
08/20/74 23N/13W-36P03 M 0950 5050 62.0F 6.8 260 -- -- -- -- -- -- -- -- -- -- -- -- --																									
16.7C																									
1-12 LAYTONVILLE VALLEY																									
21N/15W-01L02 M 1340 5050 68.0F 7.2 440 -- -- -- -- -- -- -- -- -- -- -- -- --																									
20.0C																									
21N/15W-12M02 M 1350 5050 66.0F 5.7 60 -- -- -- -- -- -- -- -- -- -- -- -- --																									
18.9C																									
1-13 LITTLE LAKE VALLEY																									
18N/13W-08L01 M 1445 5050 63.0F 6.3 230 -- -- -- -- -- -- -- -- -- -- -- -- --																									
17.2C																									
18N/13W-20H03 M 1520 5050 59.0F 6.5 220 -- -- -- -- -- -- -- -- -- -- -- -- --																									
15.0C																									

Appendix F, "Waste Water Data", which appeared in certain volumes of the Bulletin No. 130 series, has been discontinued. For information regarding waste water, the reader is referred to the recently reactivated Bulletin No. 68 series: "Inventory of Waste Water Production and Waste Water Reclamation Practices in California".

